

Indian Education

The Hindustan Publishing House,
KATCHERY ROAD,
LUCKNOW.

1939

Price—Indian, Rs 5 ; Foreign, 10 s. 6 d.

All Rights Reserved by the Publishers.

1st Edition 1938

2nd Edition 1939

PUBLISHED BY

HORI LAL SAKSENA, Proprietor
Hindustan Publishing House, Lucknow.

PRINTED BY

R. P. BHARGAVA, Proprietor
Oudh Printing Works, Charbagh Lucknow

PREFACE

THE recent reorganisation in the country in the field of education necessitated a publication exhaustively dealing with the multifarious activities in different provinces in that direction. The aim of this book is to fill in that gap. It is hoped that the publication would further encourage the expansion of education in provinces and Indian States. The chapters on the historical survey of the progress of education in various provinces and Indian States are based on Government publications and standard works on the subject. Therefore no originality is claimed.

The publishers are grateful to Mahatma Gandhi for having allowed to include the Wardha Education Committee Report and the Syllabus of Basic Education and also to the Provincial Governments for giving permission to reproduce their educational Acts. The publishers are also profoundly thankful to Shri K. Prasad and Shri G. P. Sharma for their co-operation in the production of this book.

CONTENTS

PART I

Pages.

EDUCATION IN INDIA

CHAPT. I.	A Brief Survey of Indian Education	...	3
CHAPT. II.	Indian Literacy	...	14

PART II

PROGRESS OF EDUCATION IN VARIOUS PROVINCES AND INDIAN STATES

CHAPT. III.	Education in the Madras Presidency	...	21
	The Madras Elementary Education Act	...	23
CHAPT. IV.	Education in the Bombay Presidency	...	51
	Vocational training in Primary and Secondary Schools		
	Committee	...	53
	Adult Education Committee	...	65
	Physical Education Committee	...	76

CHAPT. V.	Education in Bengal	...	81
	The Bengal Primary Education Act	...	83
CHAPT. VI.	Education in the United Provinces	...	95
CHAPT. VII.	Education in the Central Provinces	...	99
	The Vidya Mandir Scheme		100
CHAPT. VIII.	Education in the Punjab, Bihar, Assam and other Provinces	...	115
CHAPT. IX.	Education in Burma and Indian States	...	118

PART III

WARDHA EDUCATION COMMITTEE REPORT

CHAPT. X.	Wardha Education Committee Report	...	125
	Letter to Mahatma Gandhi	...	127
	SECTION I. Basic Principles	...	129
	The existing educational system		129
	Mahatma Gandhi's leadership	...	130
	Craftwork in schools	...	131

Two necessary conditions	132
The ideal of citizenship implicit in the scheme ...	133
The self-supporting basis of the scheme ...	134
SECTION II. Objectives	136
Main outlines of the seven years' course of basic education ...	137
The basic craft ...	137
The mother tongue ...	138
Mathematics ...	139
Social studies ...	140
General science ...	143
Drawing ...	146
Music ...	147
Hindustani ...	147
SECTION III. Training of Teachers ...	148
Curriculum for a complete course of teachers' training ...	150
Curriculum for a short course of teachers' training ...	153

SECTION IV. Supervision and	
Examinations	... 154
A. Supervision	... 154
B. Examinations	... 155
SECTION V. Administration	... 157
APPENDIX	... 164
A seven years' course of spinning and weaving as the basic craft	... 164
Main outline of the course	164
First year, First term	... 166
First year, Second term	166
Second year, First term	167
Second year, Second term	... 168
Third year, First term	... 169
Third year, Second term	169
Fourth year, First term	170
Fourth year, Second term	171
Fifth year, First term	... 171
Fifth year, Second term	172
Income per student for five years	... 173
Weaving section :—	... 174
Tape and duree weaving	176

PART I
EDUCATION IN INDIA

CHAPTER I

A BRIEF SURVEY OF INDIAN EDUCATION

"Education", writes Dr. F. W. Thomas, one of the most distinguished of living Indologists, "is no exotic in India. There is no country where the love of learning had so early an origin or has exercised so lasting and powerful an influence. From the simple poets of the Vedic age to the Bengali philosopher of the present day there has been an uninterrupted succession of teachers and scholars. The immense literature which this long period has produced is thoroughly penetrated with the scholastic spirit; and the same spirit has left a deep impression on the social conditions of the people among whom that literature was produced."

\ At the beginning of the 19th century there were in India a large number of recognised seats of Sanskrit and Arabic literature and indigenous institutions of an elementary type. There were the Tols, Madarsahs, Pathshalas and Maktabhs the efficiency of which varied with the extent of private support they received. Such education was mainly religious in character and the schools were usually attached to the temple or to the mosque. \ The higher type of education was also provided in Grammar, Logic, Philosophy and Science at centres

like Kashi and other places. The education of girls was, however, much neglected.

In 1781, Warren Hastings founded the Calcutta Madarsah, at the request of a Muhammadan deputation, partly with a view to produce muslim officers for the court of justice. A little later Mr. Duncan, the British Resident, with the assent of Lord Cornwallis established a Sanskrit College at Benares in 1792. As a result of the influence of certain educationalists in England a clause was inserted in the East India Company Act of 1813 which made it obligatory on the Governor-General to invest a sum of not less than a lakh of rupees for educational purposes. It was the first legislative recognition of the right of education to participate in public revenue. However, this money was not spent on mass education and only the learning of Sanskrit and Arabic could be encouraged.

Indian education received a great impetus by Raja Ram Mohan Roy who in 1816-17 founded a college at Calcutta. This college was absorbed in the Presidency College in 1855. The other impetus came from the Christian missionaries who had already made their settlement in different parts of India. The missionaries by the printing of books in local dialects developed the indigenous literature and also to some extent encouraged English education.

There was by now considerable interest in the spread of education and committees of public instruction were appointed in Bengal in 1823, and in Madras in 1826. The Bombay Government founded

a Hindu College in Poona in 1821 and decided a little later to subsidise a society for the promotion of education.

There arose in Bengal two groups. The 'Orientalists' favoured the policy of teaching through the medium of classical languages. The other group *viz.* 'Anglicists' preferred the medium of English. This struggle between the Orientalists and the Anglicists gave rise to the famous minute of 1835 of Macaulay, then Legal Member of the Executive Council of the Governor-General, which decided in favour of the Anglicists. Subsequently the two Governors-General, Lord William Bentinck in 1835 and Lord Auckland in 1839 endorsed the policy of Macaulay. As a result of this, the translations into Sanskrit and Arabic were discontinued although the schools for oriental learning were maintained. Thus the system of 'English education' was encouraged by the Government and at the same time vernacular schools also developed. Two other events gave an impetus to vernacular education—the conferment of freedom of press in 1835 and the substitution of vernaculars for Persian in the lower courts in 1837.

(The female education which was hitherto almost neglected received a little encouragement by the missionary societies in the three presidencies of Bombay, Madras and Bengal. A girls school was established in Calcutta in May, 1849.)

(The next step in the history of Indian education was the Parliamentary enquiry into the condition of India in 1853 which preceded the renewal of the East India Company's Charter. It was for the first

INDIAN EDUCATION

time in the history of India that Parliament investigated seriously and sympathetically into the development of Indian Education.) As a result of this there was constituted a separate department for the administration of education with adequate system of inspection in each Presidency and Lieutenant-Governor's provinces. A little later universities were established at Calcutta, Bombay and Madras and training colleges were opened for the training of teachers. The number of government colleges and high schools was increased and enhanced attention was paid to vernacular schools both for the secondary and primary education. Grants-in-aid were given to private institutions where necessary. Great stress was placed on encouraging vernacular education to improve mass literacy and provisions were made for opening schools and colleges for technical instruction and female education. After the Mutiny the Secretary of State confirmed this policy and took further steps for the promotion of primary education including the levy of a special rate on land to provide adequate means for financing vernacular education.

(In 1871 the Education Department was transferred by the Government of India to the Local Governments and a fixed sum was assigned to them from the central revenues for that purpose.) But the Central Government remained equally alive for the expansion of education and often made further grants-in-aid from the central revenues.

(An important feature was the appointment in 1882 of an Education Commission to review the

progress of education since 1854 with special reference to primary education.) The Commission suggested further expansion of education on the earlier lines and the Government Resolution of 1884 approved almost all the recommendations of the Commission with the result that education received further stimulus through the local bodies, grants-in-aids and private enterprise.

The Secretary of State for India in 1900 invited the attention of the Government of India to the necessity of continuing Government's control, guidance and assistance in higher education. Lord Curzon called an Educational Conference in 1901 and subsequently the Indian Universities Commission was appointed in 1902 to investigate and report on University Education in India. As a result of the recommendation of the Commission the Indian Universities Act was passed in 1904 and the Government of India passed the well-known Resolution of 1904 on the Indian Educational Policy. The Resolution covered a wide policy and reiterated the recommendation of the earlier Commission of 1882 in regard to primary education and expressed the view that insufficient and inadequate share has been spent on education. It expressed the view that primary education should be looked after with greater interest by the Provincial Governments.) The following quotation is significant of the views of the Resolution in that respect :—

“The progressive devolution of primary, secondary and collegiate education upon private enterprise and the continuous withdrawal of Government from

competition therewith was recommended by the Education Commission in 1883, and the advice has been generally acted upon. But while accepting this policy, the Government of India at the same time recognise the extreme importance of the principle that in each branch of education, Government should maintain a limited number of institutions, both as models for private enterprise to follow and in order to uphold a high standard of education. In withdrawing from direct management, it is further essential that Government should retain a general control, by means of efficient inspection over all public educational institutions."

The Resolution further directed that Educational budget estimates of the local bodies should be submitted through the Directors of Public Instruction before it was sanctioned and that every endeavour should be made to adopt the education in rural areas to the immediate needs of the peasantry. In regard to technical education the resolution emphasised the necessity for adjusting education to the need of Indian industry and announced the intention of Government for assistance in the form of scholarship to enable selected students to undergo training in Europe and America. In conclusion the Resolution laid down the policy in regard to the extension of facilities for training of teachers, the establishment of libraries for schools and the opening hostels in schools and colleges. It endorsed the view that "through female education a far greater proportional impulse is imparted to the educational and moral tone of the people than by the education of men."

In respect of the University education the Resolution supported the views of the Commission of 1902, *viz.*, that the senate should be limited in size, that the university should be given teaching powers in addition to their examining powers and that they should be required to demand a high educational standard from their affiliated colleges; it promised further financial aid to the Universities and expressed the hope that the universities might receive funds from private donors.

In 1910 the importance attached to educational development was apparent by the formation of a separate department of education in the Government of India which was hitherto a part of the Home Department. At the Durbar of 1912, the Government announced an annual grant from Imperial funds of fifty lakhs for popular education. His Majesty in January 1912 while replying to an address from the Calcutta University said :

“It is my wish that there may be spread over the land a net-work of schools and colleges, from which will go forth loyal and manly and useful citizens, able to hold their own industries, and agriculture, and all the vocations in life. And it is my wish, too, that the homes of my Indian subjects may be brightened and their labour sweetened by the spread of knowledge, with all that follows in its train, a higher level of thought, of comfort, and of health. It is through education that my wish will be fulfilled, and the cause of education in India will ever be very close to my heart.”

(The late Mr. Gokhale introduced in the Imperial Legislative Council a bill in 1911 for the expansion of the elementary education which would have made compulsory primary education permissible subject to the consent of local authorities and local governments which were to bear the cost. The bill was officially opposed on grounds that there has been no popular demand for the measure, that the local governments were opposed to it and the idea of additional local taxation was not welcomed.)

(The Government of India in their Resolution on Education in the year 1913 announced that Government had decided to assist local government by large grants, as funds became available, to extend comprehensive schemes in several provinces. The Resolution surveyed the whole field of educational work and its main features are summarised as follows : -

- (i) It refused to adopt the principle of compulsion in primary education for financial and administrative reasons, but it reaffirmed the necessity of concentrating the direct energies of the state and the bulk of its available resources on the improvement and expansion of primary education on a voluntary basis.)
- (ii) It advocated the teaching of hygiene, and the medical inspection of schools.
- (iii) It insisted on the importance of improving and multiplying the 'middle' vernacular schools, which continue the primary course and in which competent teachers for primary schools will be prepared.

- (iv) It urged the necessity of multiplying and improving facilities for the training of teachers for primary and secondary schools.
- (v) It reported that the 'education of girls remains to be organised'; and emphasised the necessity for the increase of women teachers in girls' schools.
- (vi) It reaffirmed the policy of relying mainly on private effort in secondary education with the assistance of a more elastic system of grants-in-aid, and the encouragement of varied methods of teaching and course.
- (vii) It endorsed the recommendation of the Universities Commission of 1902 that there should be secondary 'school-final' examinations, conducted by bodies other than universities.
- (viii) It recognised the necessity for improving the pay and prospects of teachers in the educational service.
- (ix) It reported an improvement in the condition of the five existing Indian universities (Calcutta, Bombay, Madras, Allahabad and the University of Punjab) as a result of the Act of 1904, but advocated a reduction of the areas of these affiliating universities and the establishment of 'teaching faculties' at their centres with adequate libraries; it announced a policy of instituting teaching and residential universities of which Dacca, Benares and Aligarh were to be the first; and it strongly urged the

necessity for providing facilities for research in every branch of learning.

The policy outline in the Resolution of 1913 encouraged educational progress and the developments fore-shadowed were in many cases delayed owing to the Great War. The only event of educational importance was the appointment of the Calcutta University Commission in 1917 and the publication of its report in August 1919. The scope of the Commission was primarily limited to the re-organisation of the Calcutta University, but many of its observations and recommendations were of a much wider application and largely influenced the development of university and secondary education in India. As a result of the findings of the Commission the Government of India issued a Resolution in January 1920 which stated "it is thought that an expression of view by the Government of India on certain points connected with the Report may not be without use in provinces other than Bengal, for, though it is fully recognised that conditions elsewhere differ widely from those in that Presidency and though the Government of India have naturally no desire to thrust upon other Local Governments and the universities schemes which result from the investigation of affairs in Bengal and in Calcutta, nevertheless some of the recommendations made by the Commission are likely to be found valuable for wider application." The Government of India emphasised certain points which were of wider interest:—the failure of high schools to give that training which the developments of the country and new avenues of

employment demanded; the necessity for recognition of the Intermediate section of the university education as a part of school education and the advisability of minimising the defects of the system of affiliated colleges by the establishment of a strong central teaching body and by the incorporation of unitary university as occasion arises. Subsequently according to the provisions of the Government of India Act, 1919 education became a provincial transferred subject entrusted to the charge of a Minister responsible to the Provincial Legislature, and no important pronouncement on educational policy has since been made by the Government of India. The educational activities in the provincial sphere have been dealt with in subsequent chapters in part II.

CHAPTER II

INDIAN LITERACY

India with a total population of over 350 millions (1931), has only 28,138,856 literates i. e., persons possessing ability to write a letter and to read the reply to it, out of them females are only 4,109,105. This comes to about 8 per cent of the total population. The actual number of literates has increased since 1921 by 5,515,205 i. e., by 24·4 per cent. Literates in the Census Report of 1921 numbered 22,623,651 i. e. 7·1 per cent of the total population. The figures for literacy of various provinces and important Indian States for 1931 are given below :

Province, State etc:	Literate per mille aged 5 and over.		
Burma	368
Cochin	337
Travancore	289
Baroda	209
Aden	182
Coorg	176
Andamans and Nicobars	170
Delhi	163

Province, State etc.:	Literate per mille aged 5 and over	
Ajmer-Merwara	125
Western India States	125
Madras States	121
Bengal	111
Bombay	108
Madras	108
Mysore	106
Assam	93
Bombay States	71
Central Provinces	66
Punjab	63
Assam States	61
Bengal States	61
United Provinces	55
Baluchistan	54
Bihar & Orissa	53
Central India	52
Hyderabad	50
North-West Frontier Province		49
United Provinces States	49
Gwalior	47
Rajputana	43
Punjab States	42
Punjab States Agency	42
Jamu and Kashmir	40
Bihar and Orissa States	39
Sikkim	35
Central Provinces States	23

The distribution of literacy among females in various provinces and Indian States is shown below :

Total number of literate females in—

	1921	1931
India	2,782,213	4,169,105
Assam	46,002	81,133
Bengal	407,831	664,507
Bihar and Orissa	109,735	139,083
Bombay and Western India states	300,952	372,154
Burma	625,706	1,010,298
Central Provinces	52,304	79,949
Madras	456,895	616,247
North-West Frontier Province	8,987	11,412
Punjab and Punjab States Agency	78,339	163,200
United Provinces	134,004	218,299
Baroda	41,300	79,667
Central India	15,514	25,572
Cochin	49,320	113,789
Gwalior	9,689	15,195
Hyderabad	43,340	68,039
Kashmir	4,007	9,078
Mysore	57,023	90,086
Rajputana	18,851	25,258
Sikkim	118	150
Travancore	296,067	351,611

By religion the literacy in 1931 was 8·4 per cent. amongst the Hindus, 9·1 per cent. amongst the Sikhs, 6·4 per cent. amongst the Muhammadans and 28 per cent. amongst the Christians. The corresponding figures for 1921 were 7·5 per cent. for Hindus, 6·8 per cent. for Sikhs, 5·3 per cent. for Muhammadans and 28 per cent. for Christians. For the year 1911 the corresponding figures were 6·4 per cent. Hindus, 7·7 per cent. Sikhs, 4·4 per cent. Muhammadans and 25 per cent. for Christians. The persons who had a knowledge of English numbered 3·5 millions.

The cost on elementary education in India is Rs. 14 per head while it is Rs. 58 per head in Japan, Rs. 148 per head in England and Rs. 213 per head in United States of America. The total number of primary schools in India in 1936 was over 250,000. England and Wales with a population of 40 millions had in the year 1936-37, 21,654 elementary schools, 10,274 Council schools, 10,631 voluntary schools, 609 schools for blinds and other infirms, besides over 20,000 schools maintained by local education authorities. Northern Ireland with a population of over a million had 1,753 public elementary schools with 197,353 pupils on roll.

Canada with a population of about 10 millions, had about 35,000 state controlled primary schools. The census of 1931 showed that 95·7 per cent. of the population in Canada over 10 years of age could read and write as compared with 94 per cent. in 1921. Newzeland with a population of about 1·5 million had more than 2,400 public primary

schools, besides 309 registered primary schools. South Africa with a total population of about 10 millions, had about 10,000 primary schools. Ireland with a population of about 3 millions, had elementary education free and had over 5,000 primary schools.

PART II

PROGRESS OF EDUCATION IN VARIOUS PROVINCES & INDIAN STATES

CHAPTER III

EDUCATION IN THE MADRAS PRESIDENCY

The presidency of Madras with a population of 46·7 millions (1931) has 3 Universities, the Madras University, the Andhra University, and the Annamalai University. The Madras University was founded in 1857 and is an affiliating University and since 1923 has been discharging teaching function to a limited extent. The Annamalai University founded in 1929 is the first attempt in South India for organizing a unitary residential type of University. The number of colleges affiliated or recognized by the Madras University in 1936 was 54, of which 16 were maintained by Government. The Andhra University founded in 1926 has 15 colleges out of which 3 are maintained by Government. On March 31, 1936 male Arts students were 11,220 and women Arts students numbered 610. Public educational institutions numbered 50,116, with 3,133,426 scholars.

In 1916 the total number of recognised primary schools was only 29,785 with an enrolment of 1,328,938 scholars. In 1921, it rose to 34,906 and 1,494,121 respectively, and in 1926 it further rose to 46,883 and 2,050,960 respectively. In 1936 there were 43,665 public elementary schools and 560 secondary schools for boys. There were

5,090 elementary and 115 secondary schools for girls. At the end of 1937 there were 41,128 elementary schools with an strength of 2,492,909 boys and girls. There were in addition 17,224 single teacher elementary schools with a strength of 728,101 pupils and over 65,000 panchayat schools. In 1923 the Government of Madras convened a special conference composed of officials and non-officials to consider the improvement and expansion of elementary education in the Province and the most important recommendation made by the conference was that each village with a population of 500 and above should be provided with a school. In 1924, as a consequence of this recommendation, an educational survey was made of all the Taluqas in the Presidency and a number of school-less centres were provided with a school with the result that the number of scholars almost doubled within a period of few months.

Public funds contributed 61 per cent of the total expenditure on education in 1935-36. (The total expenditure from all sources on primary education has increased very rapidly. In 1916 the total expenditure on primary schools was about 66 lakhs. It rose to 105 lakhs in 1921, to 150 lakhs in 1926 and to about 193 lakhs in 1936-37. In 1916 the percentage of expenditure on primary education to the total expenditure on education was 31·8; in 1921 it was 33·2 and by 1926 it had risen to 36·2.) Prior to 1922 no scheme for compulsion was sanctioned, but now compulsion had been introduced both for boys and girls in several areas.

Certain Municipalities and taluq boards are also levying education cess.

There were at the close of 1936-37, 5 Arts colleges for women with a strength of 621, besides 403 girls receiving education in men's colleges. There were 2 Sanskrit Colleges for women and 65 training schools for women. In the same year there were 82 secondary schools for girls with 22,611 girl students and 4,807 elementary schools for girls with 380,495 girls studying therein. The number of girls reading in elementary schools for boys was over 5,00,000.

(The success in the expansion of primary education in the Presidency of Madras was due to the Madras Elementary Education Act VIII of 1920,) which is reproduced below. It provided for compulsory education in suitable areas and applied to all local areas and to both the sexes.

THE MADRAS ELEMENTARY EDUCATION ACT, 1920.

Whereas it is expedient to make better provision for elementary education in the Presidency of Fort St. George;

It is hereby enacted as follows :—

PRELIMINARY

1. This Act may be called the Madras Elementary Education Act, 1920.

2. It shall come into force in such areas and on such dates as the Governor in Council may by notification direct.

3. In this Act, unless there is something repugnant in the subject or context:—

(i) 'attendance' at a school means presence for instruction at an elementary school for so many and on such days in the year and at such time or times on each day of attendance as may be prescribed;

(ii) 'Director of Public Instruction', 'inspector of schools' and 'assistant inspector of schools' mean such officer or officers as the Governor in Council may appoint to perform the duties of Director of Public Instruction, inspector of schools and assistant inspector of schools respectively;

(iii) 'district' means any local area which for the purposes of the revenue administration shall be under the charge of a district collector or which for the purposes of this Act the Governor in Council may by notification declare to be a district;

(iv) 'district board' means a district board constituted under the Madras Local Boards Act, 1884;

(v) 'elementary education' means education in such subjects and up to such standard as may be prescribed;

(vi) 'elementary school' means a school or department of a school recognized as an elementary school under section 41;

(vii) 'elementary school-place' means such accommodation and equipment as may be prescribed as necessary for a child of school-age;

(viii) 'guardian' means any person to whom the care, nurture or custody of any child falls by law, or by natural right or recognized usage, or who has accepted or assumed the care, nurture or custody

of any child, or to whom the care or custody of any child has been entrusted by any lawful authority;

(ix) 'local authority' means a municipal council, or a taluk board;

(x) 'municipal council' and 'municipality' mean respectively a municipal council and a municipality governed by the Madras District Municipalities Act, 1920, or the Madras City Municipal Act, 1919;

(xi) 'prescribed' means prescribed by rules made by the Governor in Council under this Act;

(xii) 'public management' in relation to an elementary school means management by the Government or, by a local authority; all other management shall be deemed to be 'private management';

(xiii) 'school-age' means such age as the Governor in Council may prescribe in respect of children of either sex in any local area or of any particular community;

(xiv) 'taluk board' means a taluk board constituted under the Madras Local Boards Act, 1884.

DISTRICT EDUCATIONAL COUNCILS

(1) *Their constitution*

4. For every district in which this Act is brought into force there shall be constituted a district educational council consisting of a president and such number of members as the Governor in council may prescribe.

5. (1) The Governor in Council may appoint one of the members of the district educational

council to be the president of the council or may, by notification, authorize the council to elect its president from among its own number, in such manner as may be prescribed, and subject to the approval of the Governor in council.

Provided also that the Governor in Council may, by notification, revoke such authority after previous intimation to the district educational council of the grounds upon which such revocation is proposed and after considering the explanation and objections, if any, of the council.

(2) The district collector shall *ex-officio* be a member of the district educational council.

If a district constituted under this Act comprises only part of a revenue district or comprises the whole or parts of two or more revenue districts, the Governor in Council may declare what officer shall be considered to be the district collector for the purposes of this section.

(3) The inspector and assistant inspector of schools in whose jurisdiction the district is situated shall *ex officio* be members of the district educational council.

(4) If the district collector is president of the district board, the district board shall be entitled to elect two persons to represent it on the district educational council.

If the district collector is not the president, the president shall *ex officio* be a member of the district educational council and the district board shall be entitled to elect one additional representative on the council.

(5) Every local authority within the district shall be entitled to elect such number of persons as may be prescribed to represent it on the district educational council.

(6) The other members of the district educational council shall be appointed by the Governor in Council who in making such appointments shall have regard to the representation of Muhammadans and other minorities ;

Provided that it shall be competent for the Governor in Council by notification to authorize any private educational body maintaining elementary schools or any association of managers of elementary schools to elect one or more persons to represent it on the council.

(7) The number of members appointed by the Governor in Council shall not exceed one-fourth of the total number of members excluding *ex officio* members.

6. The district educational council may elect one of its members to be the vice-president of the council.

7. The election and appointment of every president, vice-president and member of a district educational council shall be notified in the *Fort St. George Gazette*.

8. (1) Subject to the provisions of section. 10 every person appointed or elected to be a member of a district educational council shall continue in office for three years from the date of the *Fort St. George Gazette* wherein his appointment or election is notified.

(2) The president or vice-president of a

district educational council shall be deemed to have vacated his office on the expiry of the term of his membership.

9. (1) Any person appointed or elected as member or vice-president of a district educational council may resign his office by giving notice in writing to the president; the president may resign his office by giving notice in writing to the council.

(2) Any person holding a salaried office under Government who is a member of a district educational council shall, on leaving the local area over which such council has jurisdiction with the intention of remaining absent therefrom for more than three months or on his resignation, suspension, removal, or retirement from his office under Government, be deemed to have vacated his office of member of such council.

10. (1) The Governor in Council may by notification remove any president, vice-president or member of a district educational council—

(a) if he is absent for more than three months from the jurisdiction of the council or refuses to act or becomes incapable of acting or is declared insolvent or is convicted of any such offence or subjected by a criminal court to any such order as implies in the opinion of the Governor in Council a defect of character which unfits him to be president, vice-president or member of a district educational council.

(b) if he, without excuse sufficient in the opinion of the Governor in Council, is absent from more than two consecutive meetings of the council.

(2) The Governor in Council may fix a period

during which any person so removed shall not be eligible for reappointment or re-election.

11. No member of a district educational council shall receive any salary or other remuneration from the funds at the disposal of the council.

12. Every district educational council shall be a body corporate by the name of the district educational council of the local area for which it shall have been established, shall have perpetual succession and a common seal, with power to acquire and hold property, both movable and immovable, and subject to such rules as may be prescribed, to transfer any property held by it and to contract and to do all other things necessary for the purpose of its constitution, and may sue and be sued in its corporate name,

(2) *Mode of transacting business*

13. Every district educational council shall provide an office and shall meet for the transaction of business upon such days and at such times as it may arrange and also at other times as often as a meeting shall be called by the president or, in his absence, by the vice-president :

Provided that every council shall meet at least once in every two months.

14. The president or, in his absence, the vice-president shall at any time, on the requisition in writing of not less than one-third of the members of the council, call a meeting of such a council :

Provided that no such meeting shall be held

unless a notice of the meeting specifying the time and place at which, and the purpose for which, it is to be held has at least six days previous to the day of such meeting been sent by the president or vice-president to each of the members.

15. (1) At every meeting of a district educational council the president or in his absence the vice-president shall preside.

(2) In the absence from any meeting of the president and the vice-president, the members present at the meeting shall choose some one of their number to preside thereat.

16. All meetings of a district educational council shall be open to the public :

Provided that the presiding member may in any particular case, for reasons to be recorded in writing, direct that the public generally or any particular person shall withdraw.

17. (1) No business shall be transacted at a meeting unless at least one-third of the whole number of members then on the council be present.

(2) If within half an hour after the time appointed for a meeting a quorum is not present, the president, or, in his absence, the vice-president may adjourn the meeting to some future date.

(3) All questions which may come before a district educational council at any meeting shall be decided by a majority of the votes ; and in case of an equality of votes the president or other presiding member shall have a second or casting vote.

(4) No member of a district educational

council shall vote on any question coming before the council for consideration in which (otherwise than in its general application to all persons and properties within the local area) he has any pecuniary interest.

(5) No resolution of a district educational council shall be modified or cancelled within three months by such council, except at a meeting specially convened in that behalf and by a resolution of the council supported by not less than one-half of the whole number of members then on such council.

18. (1) Minutes of the proceedings at each meeting of the district educational council shall be drawn up and entered in a book to be kept for that purpose, and shall be signed by the president or the member who presided at such meeting, and shall, at all reasonable times and without charge, be open at the office of the council to the inspection of any person residing within the jurisdiction of such council.

(2) A copy of the minutes of the proceedings at each meeting shall, within three days from the date thereof, be transmitted to the district collector for publication in the district gazette in English and in the vernacular language of the district.

(3) A copy of the minutes of the proceedings at each meeting shall, within a week from the date thereof, be transmitted to the chief executive officer of each local authority represented on the district educational council, and also to each member of the council.

(4) The president and, in his absence,

the vice-president shall have the custody of the records of the district educational council and may grant copies of any such records either free or on payment of such fees as the council may determine to such officers or persons as the council may by general or special order direct.

19. (1) (a) The resolutions of a district educational council shall be carried into effect by the president, in whom the entire executive power of the council shall be vested and who shall be directly responsible for the due fulfilment of the purposes of this Act.

(b) It shall not be lawful for the president to exercise any power which by this Act it is expressly declared shall be exercised by the council.

(c) The president may authorize the vice-president by an order in writing to exercise any of the powers conferred or to perform any of the duties imposed on the president by this Act and may in like manner modify or cancel such order :

Provided that the delegation of powers or duties under this clause shall not relieve the president of any responsibility imposed upon him by this Act.

(2) When the office of president is vacant the vice-president shall exercise the functions of the president until a new president is duly elected or appointed.

If there is no vice-president, the district collector shall exercise the functions of the president until a new president or a vice-president is duly elected or appointed.

20. Every district educational council may make

standing orders consistent with this Act, and with any rules framed thereunder by the Governor in Council, in regard to the following matters:—

- (i) the time and place of its meetings;
- (ii) the manner in which notice thereof shall be given;
- (iii) the conduct of proceedings at meetings;
- (iv) the division of duties among the members of the council;
- (v) the appointment, duties and procedure of special committees consisting wholly of a certain number of members of the council or partly of such members and partly of residents within the local jurisdiction of the council;
- (vi) the persons by whom receipts may be granted for money paid to the council;
- (vii) the inspection by members of the council of elementary schools situated within the jurisdiction of such council and the inspection of accounts, books, registers and returns, reports, and other documents appertaining thereto; and
- (viii) all other similar matters.

21. The Governor in Council may, by order in writing, suspend the execution of any resolution of any district educational council or of any order issued by any district educational council or president or cancel such resolution or order and may prohibit the doing of any act which is about to be done or is being done in pursuance of or under colour of this Act, if in his opinion such resolution has not been legally carried or such resolution, order or act is in excess of the powers conferred by law.

22. (1) If at any time it appears to the Governor in Council that a district educational council or its president has made default in performing any duty imposed by or under this Act, the Governor in Council may by order in writing fix a period for the performance of such duty.

(2) If the duty is not performed within the period so fixed, the Governor in Council may appoint some person to perform it, and may direct that the expense of performing it shall be paid, within such time as he may fix, to such person by the district educational council.

(3) If the expense is not so paid, the Governor in Council may make an order directing the person having the custody of the fund constituted under section 28 to pay such expense in priority to any other charges against such fund. Such person shall, so far as the funds to the credit of the district educational council admit, comply with such order.

23. If at any time it appears to the Governor in Council that a district educational council is not properly performing its duties under this Act, he may direct that all elected and appointed members of such district educational council shall vacate their seats and that the vacancies shall be filled by election in respect of elected members, and by appointment in respect of appointed members, or that all the vacancies shall be filled by appointment.

(3) *Duties of district educational councils*

24. (1) It shall be the duty of every district educational council—

(a) to prepare and maintain a register showing all elementary schools and the number of elementary school places thus provided;

(b) to tabulate such further information and to prepare such plans or maps as may be necessary to enable the council to frame an estimate of the existing provision for elementary education and of the further provision necessary to place elementary education within the reach of all children of school-age;

(c) to prepare in consultation with the authorities concerned schemes for the extension of elementary education in each taluq board and municipal area;

(d) to arrange in consultation with the authorities concerned and with other educational agencies for the opening of additional elementary schools and the expansion of existing elementary schools with a view to giving effect as funds permit to such schemes;

(e) to grant recognition to schools under the provisions of section 41 ;

(f) to consider and pass orders on all applications under section 42 for grants-in-aid on behalf of elementary schools under private management ;

(g) to disburse all sanctioned grants-in-aid to elementary schools under private management from funds placed at the disposal of the council in this behalf by the Governor in Council ;

(h) to maintain a register of all recognized institutions in the district which provide for the training of elementary school teachers ;

(i) to prepare and maintain a register of all trained and certificated teachers employed in elementary schools in the district ;

(j) to prepare and transmit to the Director of Public Instruction proposals for increasing the supply of trained and certificated teachers ;

(k) to advise upon all matters relating to elementary education referred to the council by the Director of Public Instruction.

(2) The register referred to in clause (a) of sub-section (1) shall be maintained and the information referred to in clause (b) of sub-section (1) shall be tabulated separately for each taluk board and municipal area within the jurisdiction of the district educational council.

25. Every district educational council shall in each official year—

(i) frame and transmit to the Director of Public Instruction, by such date and in such form as he may direct, a statement showing for its district (a) the names of elementary schools under private management for which grants-in-aid have been sanctioned for that year and (b) the amount of the grant which has been sanctioned for each such school, and

(ii) furnish a report to the Director of Public Instruction, by such date and in such form as he may direct, exhibiting the grants-in-aid which it has distributed to schools within its district.

26. Every district educational council shall transmit to the Director of Public Instruction such further reports and statements as may be prescribed.

27. For the proper discharge of the duties imposed by this Act every district educational council shall employ such establishment as may be sanctioned by the Governor in Council.

(4) *Funds, budget and audit*

28. Every district educational council shall maintain a fund to which shall be credited —

(i) all sums granted by the Governor in Council for the payment of grants-in-aid of elementary education ;

(ii) all sums granted by the Governor in Council for the payment of office and establishment expenses;

(iii) all income derived from any endowments or other property owned or managed by the council ;

(iv) all other sums of money which may be received by the council for the purposes of this Act.

29. (1) The fund of each district educational council shall be lodged in such bank or Government treasury as the Governor in Council may direct.

(2) All expenses incurred by the district educational council shall be paid out of such fund.

(3) All orders or cheques upon the fund shall be signed by the president or by such person as he may authorize in writing to sign on his behalf.

30. (1) On or before the 30th November in each year every district educational council shall submit to the Governor in Council through the Director of Public Instruction, in such form as may be prescribed, a budget of income and expenditure for the ensuing financial year.

(2) The Governor in Council may pass such orders as he thinks fit in respect of the budget and the district educational council shall be bound to carry out all such orders.

31. The accounts of every district educational council shall be examined and audited by an officer appointed by the Governor in Council in this behalf and the district educational council shall carry out any instructions which the Governor in Council may issue on the audit report.

ELEMENTARY EDUCATION FUNDS

(1) *Their constitution and control*

32. There shall be constituted for each local authority in every district in which this Act is brought into force an elementary education fund to which shall be credited—

(i) the proceeds of any tax levied within the jurisdiction of such authority under the provisions of this Act;

(ii) all sums granted to such authority by the Governor in Council for the benefit of elementary education ;

(iii) all fines and penalties levied within the jurisdiction of such authority under the provisions of this Act ;

(iv) all income derived from any endowments or other property owned or managed by such authority for the benefit of elementary education ;

(v) all school fees, if any, collected in elementary schools managed by such authority ; and

(vi) all other sums of money which may be contributed or received by such authority for the purposes of this Act.

33. (1) The education fund constituted under section 32 shall be lodged in such bank or Government treasury as the Governor in Council may direct.

(2) All expenses incurred on elementary education by the local authority concerned shall be paid out of the fund.

(3) All orders or cheques upon the fund shall be signed by the chief executive officer of the local authority or by such person as he may authorize in writing to sign on his behalf.

(4) So far as the funds to credit permit, the treasury or bank shall pay.

(a) all orders or cheques signed in accordance with sub-section (3) ;

(b) all expenses incurred by the Governor in Council on behalf of the local authority, provided that the local authority has given previous authority in writing to the bank or treasury to debit such expenses to the fund without the issue of any order or cheque.

(2) *The education tax and Government contribution*

34. With the previous sanction of the Governor in Council any local authority for which an elementary education fund has been constituted under section 32 may levy within its area the following taxes, namely :—

(i) If the area is within a municipality, a tax not exceeding twenty-five per centum of the taxation leviable in that area under the law for the time being in force governing municipalities under all or any of the following heads; viz., property tax, tax on companies and profession tax;

(ii) if the area is not within a municipality, a tax not exceeding twenty-five per centum of the taxation leviable in that area under the law for the time being in force governing local boards under all or any of the following heads: viz., land cess, tax on companies, profession tax and house tax.

35. The local authority shall decide at what rates, subject to the maxima prescribed in section 34, the taxes shall be levied and may from time to time alter such rates.

36. The assessment and realization of the taxes leviable under section 34 shall be in accordance with the procedure prescribed.

37. When an elementary education fund is constituted under section 32, the Governor in Council shall contribute thereto a sum not less than the proceeds of the taxation levied under section 34 on behalf of the fund :

Provided that such contribution shall be in addition to, and not in lieu of, the amount of recurring expenditure incurred from provincial funds during the financial year before the coming into force of this Act on education in elementary schools under public management situated within the area for which such elementary education fund has been constituted.

(3) Budget and audit

38. (1) On or before the 30th November in each year every local authority for which an elementary education fund has been constituted under section 32 shall submit to the Governor in Council through the district educational council and the Director of Public Instruction, in such form as may be prescribed, a budget for the ensuing financial year showing the income and expenditure relating to such fund.

(2) The Governor in Council may pass such orders as he thinks fit in respect of the budget and the local authority concerned shall be bound to carry out all such orders.

39. The accounts of each education fund shall be examined and audited by an officer appointed by the Governor in Council in this behalf, and the local authority concerned shall carry out any instructions which the Governor in Council may issue on the audit report.

(4) Saving clause

40. Save as otherwise expressly provided by this Act, nothing in the Madras District Municipalities Act, 1920, or in the Madras Local Boards Act, 1884, or in the Madras City Municipal Act, 1919, shall affect any of the provisions of this chapter.

ELEMENTARY SCHOOLS

(1) Recognition

41. (1) The manager of any school under private or public management desiring that such

school shall be recognized as an elementary school shall submit an application in the prescribed form through the inspector of schools to the district educational council.

(2) Subject to such rules as may be prescribed the district educational council may, by an order in writing, grant such application, either with or without conditions, or refuse or defer the grant of recognition, and may in like manner cancel or suspend any order granting recognition.

(3) An appeal shall lie to the Director of Public Instruction in respect of any order passed under sub-section (2).

(4) All orders of recognition in respect of elementary schools made by the Director of Public Instruction or by an inspector of schools before this Act came into force shall be held to have been made under this section.

(2) Grants-in-aid

42. (1) The manager of any elementary school under private management desiring that such school shall be admitted to aid shall submit an application in the prescribed form through the inspector of schools to the district educational council.

(2) Subject to such rules as may be prescribed the district educational council may, by an order in writing, grant such application, either with or without conditions, or refuse or defer the grant of admission to aid, and may in like manner cancel or suspend any order granting admission to aid.

(3) An appeal shall lie to the Director of Public Instruction in respect of any order passed under sub-section (2).

(4) All orders admitting elementary schools to aid made by the Director of Public Instruction or by an inspector of schools before this Act came into force shall be held to have been made under this section.

43. The manager of any school admitted to aid under section 42 shall furnish the district educational council with returns and other information as may be prescribed and shall afford the council reasonable facilities for verifying such returns and information.

COMPULSORY ELEMENTARY EDUCATION

(1) Introduction of compulsion

44. Subject to the conditions laid down in this chapter any local authority may, by a resolution passed at a meeting specially convened for the purpose and supported by the votes of not less than two-thirds of the members present, resolve that elementary education shall be compulsory within the whole or a specified part of the local area under its jurisdiction—

- (a) for all children of school-age, or
- (b) for boys of school-age, or
- (c) for girls of school-age.

45. (1) Every resolution passed under section 44 shall be submitted through the district educational council to the Governor in Council.

(2) The Governor in Council may accept or reject any such resolution :

Provided that the Governor in Council shall reject the resolution unless

(a) the local authority concerned shall have declared by resolution its readiness to levy the taxes leviable under section 34 throughout the area specified at such rates as may be necessary to meet the expenditure involved : and

(b) the Governor in Council is satisfied that adequate arrangements have been made for the provision of trained teachers and that the number of elementary school-places in the area is sufficient or will, within a reasonable period, be made sufficient for all children of school-age residing therein in respect of whom it has been resolved that elementary education shall be compulsory subject always to the exceptions permitted by the provisions of section 50 :

Provided further that if the resolution extends only to the children of one sex the Governor in Council may reject it unless satisfied that sufficient accommodation is or will be provided as required by sub-clause (b) of the foregoing proviso for all the children of school age of the other sex resident in the area or for such proportion of them as the Governor in Council may in each case direct.

*Explanation:—*The number of elementary school-places shall not be considered to be sufficient unless provision has already been made or will, within a reasonable period, be made for the education of every child not exempted under section 50 in an

elementary school situated within one mile from the residence of such child :

Provided that in the case of any specified local area the Governor in Council may, by notification, vary the distance herein laid down for such period of time as he may think fit.

46. On the acceptance of a resolution by the Governor in Council under sub-section (2) of section 45, the fact of such acceptance shall be notified in the *Fort St. George Gazette*, and in the gazette of the district, if any, and the provisions of sections 47 to 52 (both inclusive) shall there-upon come into force within such area and from such date as may be specified in the notification.

47. No fees shall be charged at any elementary school in any area affected by a notification under section 46 :

Provided that the local authority of such area shall pay compensation for such period and in such manner as may be prescribed for any loss of income, which may be caused by such remission of fees to elementary schools under private management.

(2) *Exemptions*

48. The Governor in Council may, by notification, exempt any person or class of persons from the effect of a notification under section 46.

(3) *Responsibility of guardians*

49. In every area affected by a notification.

under section 46 it shall be the duty of the guardian of every child of school age resident in such area, subject to the exceptions authorized by section 50, to cause such child to attend an elementary school in such area :

Provided that no guardian shall be compelled to cause a child to attend a school at which attendance at religious instruction in a faith other than that two which the child belongs is compulsory :

Provided further that no guardian shall be compelled to cause a Muhammadan child to attend a school at which adequate arrangements have not been made for religious instruction in the Muhammadan faith.

50. Attendance at school shall not be compulsory in the following circumstances : —

(i) if there is no elementary school within one mile or such other distance as may have been notified under the explanation to sub-section (2) of section 45 from the residence of the child ;

(ii) if the child is prevented from attending school by reason of sickness, infirmity or other cause declared by a resolution of the local authority concerned to be a reasonable excuse ;

(iii) if the child is receiving instruction in some other manner declared to be satisfactory by a prescribed officer ;

(iv) if the child has already received instruction in an elementary school or otherwise up to the standard prescribed for elementary education ;

(v) if the child is exempt from attendance on any other prescribed ground.

(4) Attendance Committees

51. The local authority concerned shall be responsible for the enforcement of the provisions of section 49 and, subject to such rules as may be prescribed, shall for this purpose appoint one or more attendance committees.

52. (1) Whenever an attendance committee is satisfied that a guardian has without reasonable excuse failed to discharge the obligation created by section 49, it may cause a complaint against such guardian to be presented to any magistrate having local jurisdiction.

(2) If satisfied that the complaint is well founded, the magistrate shall pass an order directing the guardian to cause the child in respect of whom the complaint is preferred to attend school regularly after a specified date.

(3) If without reasonable excuse the guardian fails to comply with such order, the attendance committee may sanction his prosecution and on conviction by a magistrate the guardian shall be liable to a fine not exceeding five rupees :

Provided that any person who has on two or more previous occasions been convicted of an offence under this section shall on further conviction be liable to a fine not exceeding fifty rupees.

RELIGIOUS INSTRUCTOIN

53. (1) If at any elementary school under private management and in receipt of aid under section 42 the children are required to be present during

religious instruction based on the distinctive doctrines or creed of any particular religion, sect or denomination, and not less than ten guardians of children attending such school make an application in writing to the district educational council for the provision of elementary education in such a manner as to obviate their compulsory presence during religious instruction, the district educational council, on being satisfied that the requisite provision does not already exist in some other neighbouring elementary school, shall require the manager of the school to enter into an agreement for the exemption from presence during religious instruction of all children whose guardians make a written request therefor.

(2) If within the time prescribed the manager fails to enter into such an agreement the district educational council shall arrange with the local authority concerned for the establishment of an elementary school within one mile or such other distance as may have been notified under the explanation to sub-section (2) of section 45 from the residence of every child in respect of whom alternative educational facilities are requested.

(3) Every agreement made under sub-section (1) shall be for a stated period, on the expiry of which, it shall, at the option of the manager, be determined or renewed for a further period on such terms as may be arranged.

(4) If the agreement is determined under sub-section (3), the district educational council shall make arrangements as aforesaid for the establishment of a new elementary school.

54. If an elementary school, the manager of which refuses to enter into an agreement under section 53 or exercises his option of determining such an agreement, continues to comply with the conditions on which recognition has been granted under section 41, it shall nevertheless be eligible for such grants-in-aid as may be admissible under section 42.

MISCELLANEOUS

55. If in any area, not being a municipality, there is no taluk board, the powers and duties of a taluk board under this Act shall be respectively exercised and performed by the district board having jurisdiction over such area :

Provided that in such case the provisions of subsection (4) of section 5 shall not apply.

56. (1) The Governor in Council may after previous publication make rules not inconsistent with this Act to carry out all or any of the purposes of this Act.

(2) In particular and without prejudice to the generality of the foregoing provision he may make rules—

(a) declaring what shall constitute 'elementary education,' 'elementary school place,' 'school age' and 'attendance at school';

(b) declaring what schools shall be classed as elementary ;

(c) regulating the election of presidents of district educational councils and the number of persons which each local authority can elect to represent it on the district educational council ;

(d) regulating the appointment, pay, punishment and removal of the officers and servants employed by district educational council ;

(e) determining the conditions subject to which property may be acquired, held and transferred by district educational councils ;

(f) laying down the registers, statements, reports, returns, budgets and other information to be maintained or furnished by district educational councils, by local authorities, by managers of elementary schools under private management and by attendance committees ;

(g) regulating the procedure for the assessment and realization of the taxes leviable under section 34 ;

(h) declaring the conditions subject to which schools may be admitted to recognition or aid ;

(i) regulating the period during which and the manner in which compensation shall be paid under section 47 ; and

(j) regulating the appointment of school attendance committees.

CHAPTER IV

EDUCATION IN THE BOMBAY PRESIDENCY

The Presidency of Bombay with a population of about 18 million (1931) has one University *viz.* the Bombay University. It was founded in 1867 and is an affiliating University. There are 21 arts colleges and 13 professional colleges under the University. They give instruction in Engineering, Medicine, Agriculture, Commerce and Law. In 1935-36 the number of students in arts colleges was 11,413 and in professional colleges 3,397.

Recognised and unrecognised educational institutions numbered 17,314 with 14,76,404 scholars in 1935-36. Secondary schools numbered 636, with 1,13,247 pupils. (There were in the same year 14,952 primary schools with 12,48,012 pupils.) In 1916 the total number of recognised primary schools was only 10,890) with an enrolment of 6,70,141 scholars. The corresponding figures for 1921 and 1926 were 13,018 schools with 8,07,036 scholars and 13,448 schools with 9,13,163 scholars respectively.

To the total expenditure on education Government contributed 41·2 per cent. local authorities 18·8 per cent. and fees 24·6 per cent. (In 1916 the total expenditure from all sources on primary

education was Rs. 63·46 lakhs. In 1921 it rose to 127·21 lakhs and in 1926 it was 181 lakhs. It has since further increased. In 1916 the percentage of expenditure on primary education to the total expenditure on education was 41·4. In 1921 it was 48·3 and by 1926 it has risen to 48·8. The percentage has since further increased.)

The Bombay Elementary Education Act was passed in 1923. It provided for the transfer of the management of public elementary schools to newly constituted school committees of local authorities and for the introduction of free and compulsory education in approved local areas. A new Act dealing with primary education in the Presidency is now before the Bombay Legislature.

In the Bombay Budget for 1938-39 it is proposed to create a Provincial Board of Education to advise the Government on questions relating to education. The total new grants to the school boards would amount to Rs. 11,70,000 recurring and a little less than Rs. 7,000 non-recurring. Besides that a sum of Rs. 1,00,000 non-recurring has been provided for to help the local bodies for constructing school houses while a further sum of Rs. 8 lakhs recurring is intended for primary education through voluntary agencies.) Grants would be made to stimulate efforts to popularise Hindi as the *lingua franca* of India. It is proposed to spend Rs. 70,000 recurrent and Rs. 1,25,000 non-recurrent for adult education, out of which Rs. 50,000 would be for village libraries. A sum of Rs. 1,35,000 recurrent and Rs. 1,00,000 is intended to finance central vocational

schools. Another sum of Rs. 1,00,000 recurrent and a similar sum non-recurrent is intended for converting high schools into junior vocational schools.

It is proposed to spend Rs. 2,17,000 for providing physical training to teachers and medical inspection of children in schools.

An additional sum of Rs. 35,000 recurring and Rs. 50,000 non-recurring has been provided for the spread of secondary and higher education among the backward and intermediate classes. A part of this sum of Rs. 50,000 would be directed towards female education among the Muslim community.

The question of over-hauling the system of education in the Presidency of Bombay has been thoroughly dealt with by 3 committees appointed for the purpose. They were the Vocational Training in Primary and Secondary Schools Committee, the Adult Education Committee and the Physical Education Committee. They finished their labours and submitted their reports in May 1938. The recommendations of these committees are very important and are of all India interest.

Below is given a summary of the recommendations of committee appointed by Bombay Government to report on the Vocational Training in Primary Schools and consequent re-organisation :

A. PRIMARY EDUCATION

1. After very careful consideration we have come to the conclusion that the principle of "educating children through purposeful creative activities leading on to productive work" is sound. Its adop-

tion is best calculated to remedy the main weaknesses obtaining in the present system of education.

2. We are of opinion that a continuous course of seven years should be the minimum education for every citizen, that his course should constitute Basic Education, and should be called "Primary." Standards 1 to 4 should be called lower primary or elementary and standards 5 to 7 upper primary.

3. We recommend that the standards of the primary course be numbered consecutively as standards I-VII.

4. After careful consideration we have come to the conclusion that six plus should be the age of admission to schools as well as the minimum age for compulsion.

5. While we realise that, for financial reasons, it is not possible to provide immediately "Kindergarten, Montessori, or Nursery" schools for children of pre-school age, we recommend that the responsibility of the State in this respect should be steadily kept in view and necessary provision in this direction should be made as soon as practicable and that, in the meantime, properly constituted private institutions should be encouraged to organise such schools.

6. We are of opinion that fresh admissions to the lowest class, *i. e.*, to Standard I should ordinarily be made within two months from the beginning of the school year.

7. While we realise that for financial reasons compulsion cannot at present be enforced beyond the age of 11 or Standard IV, we are of opinion that for the full attainment of the objective of Primary

Education the ultimate aim should be a seven years' compulsory course for boys and girls.

8. We recommend that Local Authorities and Managements of approved Schools should be permitted, if they so desire, to introduce the shifts system and other forms of part time instruction in their schools with a view to accelerating the spread of education among the masses.

9. We are of opinion that no fundamental differentiation should be made in the courses for urban and rural schools but that the teaching should relate to the environment of the pupil.

10. We are of opinion that so far as general education is concerned there should be no fundamental differentiation in the courses for boys and girls.

11. We are of opinion that at the Primary stage not more than half the school-day should ordinarily be devoted to formal instruction in the class-room.

12. We are of opinion that among others the following should be chosen as basic crafts in the reorganised primary schools :

- | | |
|---|--------------------------|
| (1) Agriculture including subsidiary occupations. | Rural area. |
| (2) Fruit and Vegetable gardening. | } Rural and Urban Areas. |
| (3) Spinning and Weaving. | |
| (4) Wood-Work ... | |
| (5) Clay-work ... | |
| (6) Home Craft ... | |

13. We are of opinion that Central Schools should essentially be schools of general education. They should be labelled neither vocational nor pre-vocational.

14. We are of opinion that the articles that are produced by School Children under the new Scheme of education should have as far as possible useable and/or marketable value.

15. In view of the fact that Hindustani is fast becoming the national language of India, it is desirable that people in the non-Hindustani Provinces should have a working knowledge of every-day spoken Hindustani. We, therefore, recommend that suitable provision should be made for the teaching of Hindustani in the upper primary standards.

16. We are of opinion that special impetus should be given to the spread of education among girls and that in every scheme of compulsory education preference should be given to girls.

17. We recommend that, in view of the present schools being examination-ridden, external examinations should be abolished. Heads of Schools should hold their own examinations and make promotions after taking into account the record of the pupil's attendance, work in the class-room, farm and workshop and in general extra school activities, as also his performance in school examinations.

18. We recommend that provision should be made at suitable centres for continuation courses for the benefit of children who may leave school before completing the full primary course.

19. We are of opinion that early provision

should be made for more training institutions and for an increase in the number of places in the existing women's training institutions with a view to securing more trained women teachers for lower classes of primary schools.

20. We are of opinion that for the success of the scheme of Basic Education, it is essential that provision for a four years' normal course (on a par with the Secondary School Course) for the training of teachers of basic schools should be made and that at least one such normal school should be maintained for each district.

21. We are of opinion that special training institutions for the training of teachers of Central Schools and supervisors should be organised in all Educational Divisions and arrangements should be made in these institutions for vacation or refresher courses for teachers already in service and also for the systematic use of the Cinema, Radio, Museums, etc., as definite aids to work in schools.

22. We are of opinion that Supervisors of Primary schools should be specially trained for their work and that each such supervisor should ordinarily be in charge of about 50-60 schools with headquarters near about the centre of his beat.

B. SECONDARY EDUCATION

23. We are of opinion that the Secondary School Course should begin at the end of the seven years' course of Primary Education.

24. We recommend that Managements of High

Schools wishing to maintain Standards V to VII of the Primary Course should be encouraged to maintain classes for the full seven years primary course.

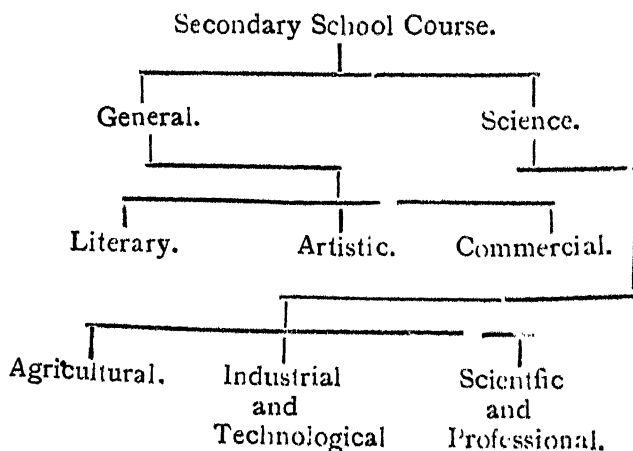
25. We recommend that the duration of the Secondary School Course should be four years, the Standards being numbered VIII, IX, X, XI in continuation of the Primary Standards I-VII.

26. We are of opinion—

(a) that the Secondary School course should be divided into two groups :—

(i) General and (ii) Science.

(b) that the different courses under each head should be as under :—



(c) The four years' course should be divided into two stages :—

(1) Standard VIII and IX and (2) Standards X and XI.

For standards VIII and IX, the course should be common to all, with the exception of practical work.

We recommend that a special committee should be constituted to draw up detailed syllabuses.

27. We are of opinion that, to start with, teachers of requisite qualifications for Vocational work should be selected so far as possible from among teachers who have worked or are working in Vocational Institutions of good standing and established reputation, in consultation with a Board of experts.

28. We recommend that in Secondary Schools the mother-tongue should be the medium of instruction in all subjects except English and Hindustani.

29. We are of opinion that English should not ordinarily be introduced before the first year of the Secondary School Course, i.e., before the commencement of the work of Standard VIII. If, in any locality, there is an effective demand for the teaching of English in the higher primary stage and if thoroughly satisfactory arrangements by the appointment of a qualified teacher or teachers for instruction could be made, instruction in the language may be permitted as an optional subject from that stage without any financial obligations on Government.

30. We are of opinion that the aim of teaching English should be essentially practical.

31. As in our opinion the whole system of Secondary Education is examination ridden, we recommend that with a view to removing the tyranny of the Matriculation Examination, Heads of Secondary Schools should be permitted to hold their own examinations and issue Secondary School Leaving

Certificates on the basis of full four years' record of pupils' work in the class-room, on the play-field, in the work-shop, in the social and general activities of the school, as also his performance in the school examinations.

32. We recommend that the University be moved to have the present Matriculation Examination replaced by special tests or examinations for entrance to Colleges affiliated to the University with a view to securing right type of students for University courses, none but those holding the requisite Secondary School Leaving Certificates being considered eligible for admission to the entrance tests of Colleges.

33. We are of opinion that till such time as the University decides to abolish the Matriculation examination, it should be moved to take steps to improve the Matriculation Examination by providing alternative courses of studies and by modernising the Examination generally.

34. We recommend that English-teaching Schools that are permitted to teach English from the initial stage (as the mother-tongue of the pupil is not one of the recognized languages of the Province) may continue to do so as at present provided that the schools arrange for regular instruction in one of the recognised languages of the Province and or in Hindustani.

35. We are of opinion that the Department of Education should arrange for the periodical inspection of Vocational work in secondary schools in consultation with a Board of Experts.

C. GENERAL

36. We recommend that the curricula sanctioned by Government should be regarded as standard in which alterations or modifications not inconsistent with the principles and spirit of the sanctioned Course may be made to suit local or special conditions after intimation in writing to the Department of Education before the commencement of the school year.

37. We recommend that an Advisory Board of Education composed of official experts in the different branches of education and non-officials eminent in educational, vocational, business, or social activities, should be constituted. Its function should be :—

(1) To advise Government on matters of educational policy and practice.

(2) To collect information about educational activities and experiments in other parts of India as also in foreign countries.

(3) To issue bulletins disseminating modern ideas in education.

(4) To suggest ways and means for securing the co-operation of State utility services as also of commercial and industrial firms, particularly in the matter of pre-vocational training.

(5) To suggest arrangements for vocational guidance to pupils in secondary schools.

The advisory Board should appoint sub-committees for (1) general education and (2) pre-vocational training with powers to co-opt experts.

38. We are convinced that for the success of

the new scheme it is essential that a Special Publication Bureau should be constituted for the preparation of books and appliances for the use of teachers as also for village libraries, school children and literate adults.

39. We are of opinion that the emoluments of teachers in primary and secondary schools should be in accordance with the standard scales of pay that may be laid down for other public servants of similar attainments and responsibilities.

40. We recommend that the scale of grants to aided schools should be revised to enable them to employ qualified teachers on adequate scales of pay with reasonable fixity of tenure and provision for old age and also to enable them to meet the extra cost involved by the provision of practical work in primary and secondary schools.

41. We are of opinion that libraries specially meant for the benefit of children who cannot continue their school course beyond Standard IV should be organized in villages beginning with those having schools.

42. We recommend that Government should publish pamphlets giving information about careers for pupils and also about the preliminary education needed for such careers.

43. We are of opinion that part-time classes for continuation or vocational education of those who cannot avail themselves of education in day or full-time schools should be organised as suggested in the Abbott-Wood Report, wherever there is a demand for them.

44. In view of the fact that this Committee has put forward a Scheme of Primary and Secondary Education with substantial practical instruction, it is essential to provide an adequate number of specialised vocational, industrial, trade and technical institutions. We, therefore, recommend that Government should take steps for the establishment of such institutions.

D. TRANSITIONAL ARRANGEMENTS.

45. We are of opinion that a Special Officer not lower in rank than a Divisional Educational Inspector be appointed immediately to organise all work in connection with the initiation and development of the scheme of Basic Education, that he should act in consultation with a small Advisory Committee specially constituted for the purpose and that he be given the help of necessary Assistants.

46. We recommend that compact areas providing necessary facilities be selected in each district to try the experiment of "Basic Education." So far as possible, all schools in such areas should be transformed into schools of the new type, the full Primary Schools within the areas being organised as Central Schools *i. e.* schools teaching the full seven years basic course with arrangements for instruction in two or more productive crafts.

47. We recommend that the above experiment be tried in the first instance during 1938-39, that if the results are assuring enough the scope of the experiment be extended during 1939-40, that the

position be reviewed fully before the end of 1939-40 and that in the light of experience gained, arrangements for the complete reorganisation of Primary Education be made within five years.

48. The Committee is convinced that for the success of the Scheme of Basic Education it is essential that immediate arrangements for the special training of select trained teachers preferably with aptitude for productive or manual work of some kind should be made separately for each Educational Division. The emergency course of training at the start should be of about six months and the instruction should include among other things.

(1) Training in at least two basic crafts.

(2) Formulation and working of simple projects and schemes of correlated studies.

(3) Inculcation of ideology of education through productive work *viz.* method of learning by doing, relating education to actual life, scope of initiative, sense of social responsibility, spirit of social service for national co-operative community.

(4) A Special Course in Physical Training, Drawing and Music.

(5) A short course in Physiology, Hygiene, Sanitation, Dietetics, Social studies and Hindustani.

(6) Teaching of at least 25 lessons in the practising school under proper supervision.

These training schools should be residential institutions where the individual teachers under training have opportunities of receiving training to live a vigorous social life in an atmosphere of perfect co-operation.

49. We recommend that the supervisors for the experimental schools should be select men and women who should be specially trained to enable them to supervise and guide the work in the reorganised schools in their charge.

The following is a summary of the recommendations of the Adult Education Committee appointed by the Bombay Government in 1938.

1. Adult classes should be opened on a wide scale only after previous preparation of the ground.
2. The first step in a programme of Adult Education as it affects the villager, should be an endeavour to help him to overcome his dejection and apathy and to find an interest in life.
3. Adult Education must have a very prominent place in any programme looking forward to building up and organising a strong and efficient democracy.
4. Adult Education should not be regarded as mass political propaganda.
5. All illiterates between the ages of 14 and 50 should be regarded as candidates for education.
6. The liquidation of illiteracy calls for an attack upon two fronts—
 - (a) the extension of primary education
 - (b) the extension of Adult Education
7. Government should use all legitimate means of propaganda to arouse the villager from his lethargy.

8. The Committee accept the Census Definition of Literacy, as a minimum standard, but strongly urge that, wherever possible, literacy education should extend beyond this bare minimum.
9. Government have a definite duty to promote literacy education.
10. Government, acting through their Central Adult Education Board (to be created) should formulate a definite policy of advance, indicate certain standards of progress and recommend methods and materials for furthering adult literacy.
11. Government should assist in training workers for the literacy campaign.
12. Government should be largely responsible for the finance of the literacy programme.
13. Government should take the lead and strive to make their own employees literate within one year.
14. Text books for literacy classes should bear a relation to the occupational life of the people.
15. Government should give grants-in-aid to supplementary vocational training classes.
16. Government should give grants-in-aid to Adult Education work at the extension level.
17. Government should both directly and indirectly encourage adult recreational activities.
18. The major responsibility of Government for Adult Education should lie in the field of literacy education.

19. The Adult Education movement in rural areas should be linked up with a general programme of rural reconstruction.
20. Any practicable scheme for Adult Education should be comprehensive enough to utilize to the full all agencies now at work in the field.
21. Adult Education should be one of the compulsory duties of School Boards, but not of the educational staffs of the Boards.
22. Every training institution should regard training in teaching adults as an important part of its curriculum.
23. The Committee recommend the creation of a Central Adult Education Board of three members for organising and administering the Adult Education programme within the Province.
24. This Board should work in the closest co-operation with the Education Department.
25. The members of the Board should be the best people available in the province and should hold office for a period of five years.
26. Upon appointment, the Board should survey the field and submit its detailed proposals for work to Government.
27. Government should determine their policy upon the basis of these proposals.
28. The Central Board should be responsible for the preparation of the whole machinery.
29. The Central Board should appoint Divisional, District and Taluka Adult Education Committees.

30. There should be four Divisional Adult Education Committees of three members each ; the term of office should be for three years.
31. There should be about 30 Urban Adult Education Committees, which should be autonomous.
32. There should be 20 District Adult Education Committees, of five members each, selected for a period of two years.
33. There should be Taluka Adult Education Committees of five members each, selected for a period of two years.
34. The District Adult Education Committees should appoint Local Adult Education Committees, of not more than seven members each, the members to hold office for a period of two years.
35. Only the three members of the Central Adult Education Board should receive salaries.
36. Administrative expenses of the various committees should be regarded as a legitimate charge on the total budget.
37. Urban Adult Education Committees should be financed locally.
38. Recommendations regarding possible ways of raising funds for the use of the Central Adult Education Board.
39. The Committee recommend certain factors to be taken into account by Government in considering their financial policy.
40. There should be a strong inspectorate under the Central Adult Education Board.

41. Wherever possible, the services of the inspecting staff of the Department of Education should be utilised.
42. The organization must not be too rigid—experimentation should be encouraged.
43. Adult Education classes when publicly supported, should be open to all, irrespective of birth, caste or creed ; though some modifications of this principle may need to be made in the case of women's classes.
44. Adult Education classes receiving public financial support should not be used as propaganda for any particular religion.
45. Prisoners in central jails should be regarded as candidates for adult education.
46. The system should never become so interested in numbers that it loses sight of men and women.
47. The employers should share responsibility with Government for the education of workers.
48. The Committee do not recommend that the Mundhwa Scheme should be introduced into all industrial establishments.
49. It should be possible to extend the Mundhwa Scheme in small establishments, where close, friendly relationships prevail between employers and employees.
50. Government should appeal to employers of labour to regard the eradication of literacy among their employees as a moral and social duty.

51. Workers' classes, wherever possible, should be held in company premises.
52. Recommendations for financing workers' classes.
53. "Employers of labour" should not refer simply to the Cotton Textile Industry and Railways. It should refer to all establishments coming under the Factory Act.
54. Any compulsory contribution should be levied on all such employers.
- 54a. Government and the Local Authorities should not only share in the joint contribution, but also give an impetus to the movement by educating their own illiterates.
55. If Government can devise means for reaching small employers and private agencies employing illiterates, these should certainly be regarded as potential contributors.
56. A compulsory levy should not be made upon labour at this stage.
57. The Adult Education of workers in some industries might be undertaken by the workers themselves.
58. The Central Adult Education Board should sponsor preliminary work planned to secure the confidence of the people.
59. The rural adult worker should not only know education, but also rural conditions.
60. The members of the Local, Taluka and District Adult Education Committees should place their specialised knowledge at the service of the people.

61. Workers, where possible, should move about in groups—the abilities of one worker supplementing the abilities of another.
62. In areas where the people are psychologically ready, adult classes may be opened without delay.
63. So far as is possible, new work should not be started in isolated villages, but in natural tracts including about 40-50 villages and hamlets.
64. A preliminary survey tour should be made before beginning work.
65. The workers should determine what available resources—both natural and human—are still unemployed, and how they may best be harnessed.
66. Preliminary ground work must also be done in urban areas.
67. Suitable men and women from the existing group of teachers and rural workers should be selected on the basis of their past records and given suitable training for carrying out the new adult education programme.
68. The Central Adult Education Board should lay down principles for guidance in the selection of teachers, but the actual selection of workers should be left to the District Adult Education Committees.
69. Plans recommended for the training of workers.
70. Experiments in methods of teaching should be encouraged.

71. The teacher should understand the psychology of the adult illiterate.
72. Recommendations regarding literature for adults in the first stage of literacy training.
73. Recommendations regarding literature for adults in the continuation stages.
74. The number of materials for the use of adults in the preliminary stage must be increased and their quality improved.
75. Considerable latitude must be allowed to individual teachers in the choice of materials.
76. Writers and publishers should be given encouragement to produce new materials.
77. News sheets should supplement the more formal materials used for continuation classes.
78. The education of adult women should be regarded as of more than ordinary importance.
79. Wherever possible, women students should be taught by women teachers.
80. The attempt should be made to secure for Adult Education work in rural areas, married couples with such training that both husband and wife can serve in the educational programme.
81. In villages where there are girls' schools, the services of the mistresses of the schools should be utilised for the teaching of adult women.
82. The number of women primary school teachers

in the villages should be increased. This move will be of benefit both to primary and adult education.

83. The adult education of women should be related to the maternity and child welfare movement.
84. Literate men should be encouraged to teach the illiterate women members of their households, but specific classes for women should be formed wherever possible.
85. As much of the success of the education of adult women will depend on the initiative and resourcefulness of the women members of the District and Taluka Adult Education Committees, great care should be exercised in their selection.
86. In towns and cities, educated women of the middle classes should be encouraged to help in the education of their illiterate sisters.
87. In Women's adult education, as in general adult education, the ground should first be prepared.
88. In rural areas all women's classes should begin by teaching some simple cottage industry of a local character.
89. Great emphasis should be laid upon child welfare work and maternity talks.
90. Adult education should not be forced upon over-worked women as an additional burden.
91. Instruction should be made as simple as possible, in the colloquial language.

92. The literacy classes should only be held for a short period of time in the early stages.
93. Sewing or handicraft classes should be introduced as an inducement for women in the towns to attend the classes.
94. Recommendations regarding the curriculum for women's classes.
95. The co-operation of Women's Association should be sought.
96. Collective care should be provided for small children in order to enable mothers to attend classes.
97. Government should subsidise women doctors in rural areas, and the services of the doctors should be enlisted in the adult education programme.
98. An appeal should be made to employers to arrange for the education of women industrial workers on company time.
99. Until the literacy campaign becomes sufficiently developed, libraries should be restricted to villages having full-grade primary schools.
100. Recommendations regarding the functions of village reading rooms.
101. Village libraries should be of the circulating type.
102. Above the village libraries, there should be group and district libraries.
103. Village reading rooms should be maintained and financed by the local Adult Education Committees, in co-operation with the village panchayat and co-operative society.

104. Recommendations regarding the finance of village circulating libraries.
105. Village libraries should be planned for the use of both men and women readers, and should contain a supply of books of special interest to women readers.
106. Recommendations regarding the finance of group circulating libraries.
107. Recommendations regarding the finance of district libraries.
108. District libraries should be under the direct control and management of the District Adult Education Committees.
109. Group and village libraries should be under the control of the Local Adult Education Committees.
110. The urgency of the literacy problem leads the Committee to recommend that expenditure for visual aids in education must be regarded as of secondary importance.
111. Visual education, to be effective, should be carefully prepared for and followed up.
112. The production of educational films by Government should wait upon the liquidation of more immediate and pressing responsibilities.
113. The Visual Education Department should, as a first step, carefully consider how far the present method of work is really educational.
114. The next step in visual education, so far as the Visual Education Department is concerned, should not be the purchase of more lanterns

- and cinema machines, but such internal planning and co-ordination as will make the use of the existing material more effective.
115. This step taken, the slides and films under the control of the Education Department should be utilised to the fullest extent possible in the programme of adult education.
 116. Further experimentation with village broadcasting is necessary.
 117. In the present state of affairs, the radio should be looked upon as an auxiliars agency in an adult education programme.
 118. The gramophone should continue to serve as an adjunct to the more formal educational programme.
 119. Certificates for literacy may be given to those who attain the fixed standard.
 120. Special recognition should be given to villages which attain a fixed standard of literacy by December 31st, 1940.
 - 120a. Special recognition should be given to teachers who make 100 illiterate adults literate.
 121. Government should consider making certain concessions to those villages which achieve a high standard of literacy.
 122. Until the Central Adult Education Board works out a new basis for grants-in-aid, the existing scheme of grants to special classes should be continued and extended.

The following is a summary of the recommendations of the Physical Educational Committee appointed by the Bombay Government in 1937 :

1. Physical education should be looked upon as an integral part of general education.

2. Government should undertake the responsibility of paying the full share of grant-in-aid due on all expenditure on physical education incurred by a school or a local body, irrespective of Government's ability to pay the ordinary grant-in-aid on the total expenditure of that school or local body.

3. The expenditure on expensive games like tennis and cricket, should not be considered as admissible for the grant-in-aid recommended above.

4. Where suitable land is available Government and local bodies should either make a free gift of it to the local schools or at least permit its use on a nominal rent. Where such land is not available suitable plots should be acquired for schools on a grant-in-aid basis.

To solve the problem in big cities, Government should press the respective municipalities to make adequate provision for open spaces in their town planning schemes.

5. Physical education should be considered as a compulsory subject in the school courses of studies and it should have the status of a major subject—mother-tongue, history or mathematics. The minimum period of tuition should be laid down as five hours instead of four, per day, out of which 45 minutes at least should be given to physical activities.

6. As the physical training periods must be either from 4 to 6 p. m. or from 7 to 9 a. m., it is necessary that the majority of the class-room teachers.

should also be physical instructors and be able to control the classes on the playground as well as in the class-rooms.

7. Government should start a Training Institute for physical Education in June, 1938, admission to it being open to Graduates. The total number of admissions to this Institute should be 100, and half the number of the places may be given to women applicants. No fees should be charged in this Institute for tuition, and about 10 per cent. of the students under training should receive stipends.

The staff should consist of the Principal (an Indian) and four assistants, two of whom should preferably be qualified women teachers.

8. Government should also investigate the possibilities of establishing at an early date a College of Physical Education, on a par with the College of Engineering, with a three years' course after the Intermediate Examination in science.

9. As soon as the time is ripe for it, Government should create a special agency for inspecting and directing the physical education in schools, the agency consisting of the Chief Inspector with four Divisional inspectors and the requisite number of District Supervisors.

10. Government should also institute short term courses (i) for secondary teachers, (ii) for primary teachers in rural areas and (iii) for primary teachers in district towns. The first should be given in central camps, and the second by itinerant teachers moving from place to place. The third should obviously be in the district town itself.

11. Some legislation seems necessary to prevent the approach of hawkers to the streets where schools are situated, during the time of the day when the schools are in session.

12. Government should create a statutory Standing Committee to advise the Minister of Education on all matters of physical education, the committee consisting of three ex-officio members and six non-officials, the chairman of the committee being nominated by Government from among the non-official members.

13. The Standing Committee should be responsible for propaganda on physical education.

14. The Committee recognizes the gymnasia as valuable national assets in physical education and recommends that they should receive help from Government.

15. Hindi should be used when commands are given in P. T. exercises.

16. The Physical Training Institute should be located in Poona on the Deccan College premises.

17. In Physical education syllabuses preference should be given to Indian games.

18. Physical Education Days, Weeks and Months should be observed in schools. Days for demonstration in hygiene, Weeks for social work and tournaments, and Months for military training.

19. Senior students should be formed into volunteer corps to render social service.

20. Pamphlets on diets written in simple style in the different languages of the province, should

be widely distributed by Government, to educate the masses in dietetics.

21. Standing Committee may prepare its own text-books on dietetics for the use of school children or guide the authors of such text-books as are already used in schools, in revising them.

22. The Standing Committee should undertake educative propaganda for organizing charity and supplying milk, free of cost, to school-going children.

23. Government should control Sadavartas and other endowments for feeding the poor, by legislation if necessary, and should reserve them for the benefit of school-going children.

CHAPTER V

EDUCATION IN BENGAL

Bengal Presidency with a population of over 50 millions has two universities, the Calcutta University and the Dacca University. The Calcutta University was founded in 1857 and is both an affiliating and a teaching university. The Dacca University founded in 1921 is a teaching university. Arts colleges for males number 43 with 24,497 students out of which 10 are maintained by Government.

Recognised educational institutions in 1935-36 numbered 68,076 and un-recognised 1350. The number of pupils in all classes of these institutions was 31,46,291. There were over 3,000 secondary schools for boys and 92 institutions for training of teachers. There are 18,120 institutions of all kinds for girls, out of which 67 were institutions for the education of the children of European and Anglo-Indian community.

In 1916 the total number of recognised primary schools was only 40,410 with an enrolment of 13,27,422 scholars. The number in 1926 increased to 50,923 schools with an enrolment of 16,50,555 scholars. The number of schools and scholars has since further increased. In 1916 the total expenditure from all sources on primary education was

Rs. 43·03 lakhs. In 1921 it was 51 lakhs and in 1926 it was 62·33 lakhs. In 1916 the percentage of expenditure on primary education with total expenditure on education was 16·7; in 1926 it was 16·5. The total expenditure on education in Bengal amounted to 444 lakhs in 1935-36.

There were 44,495 primary schools for boys in 1935-36, and on 31st March, 1936, 19,16,794 pupils were registered in them. Besides these, primary classes of secondary schools had 1,97,641 pupils. There was a total increase of 36,356 pupils in 1935-36. On the 31st March, 1936 there were 8,72,377 Hindu and 10,56,379 Muhammadan boys in the primary stage of instruction. The percentages of Hindu and Mohammadan boys to the total Hindu and Mohammadan male population were 7·6 and 7·4, respectively. The total cost of maintaining these schools amounted to Rs. 66,62,424, of which Rs. 22,25,780 came from Provincial revenues, Rs. 8,07,752 from District funds and Rs. 7,79,435 from Municipal funds. The expenditure incurred by District Boards on primary education was less than in the previous year. This was mainly due to the payment of arrear stipend of the year 1933-34 in 1934-35. In the same year there was 912 Panchayati Union Schools for boys and a grant of Rs. 1,41,768 was sanctioned for the maintenance of the schools for boys and girls. Further extension of the scheme was postponed on account of the increasing application of the Bengal (Rural) Primary Education Act of 1930. On the 31st March, 1936 there were in Calcutta 512 primary schools for

Indian boys attended by 40,378 pupils, of whom 27,118 were Hindus and 13,089 were Muhamadans. The total cost of maintaining primary schools in Calcutta amounted to Rs. 7,43,917.

The Bengal Primary Education Act IV of 1919 as amended up-to-date is reproduced below:—

BENGAL ACT NO. IV OF 1919

THE BENGAL PRIMARY EDUCATION ACT, 1919

*As modified by Act III of 1921 and Act VII of 1932.
An Act to provide for the extension of primary education
in Municipalities and in certain other areas in
Bengal.*

Whereas it is expedient to provide for the extension of primary education in Municipalities and in certain other areas in Bengal;

It is hereby enacted as follows:—

PRELIMINARY

1. (1) This Act may be called the Bengal Primary Education Act, 1919.

(2) It extends in the first instance to all Municipalities in Bengal:

Provided that the Local Government may, by a notification published in the *Calcutta Gazette*, extend the provisions of this Act, with such modifications, for the purposes of adaptation, as they may deem fit, to any area in a Union constituted under section 38 of the Bengal Local Self-Government Act of

1885, or under section 5 of the Bengal village Self-Government Act, 1919 and may authorize the Union Committee or the Union Boards for such area to exercise and perform all or any of the powers and duties conferred and imposed on the commissioners by this Act, subject to such control by the District or Local Board as the Local Government may prescribe.

2. In this Act, unless there is anything repugnant in the subject or context,—

(1) “to attend a recognized primary school” means to be present for instruction at such school for so many and on such days in the year and at such time or times on each day as may be prescribed by the School Committee for such school, subject to the rules and orders of the Education Department of the Local Government;

(2) “Commissioners” means the persons for the time being appointed or elected to conduct the affairs of a Municipality;

(3) “guardian” includes a parent or any person who is liable to support, or has the custody of, a boy not being less than six or more than ten years of age;

(4) “Municipality” means Calcutta, as defined in clause (7) of section 3 of the Calcutta Municipal Act, 1899, or any place in which the Bengal Municipal Act, 1884, is in force;

(5) “primary education” means such elementary education as may be prescribed from time to time for primary schools by the Education Department of the Local Government;

(6) "recognized primary school" means a school (or a department of a school) appropriated to primary education and for the time being recognized by the Education Department of the Local Government for the purposes of such education; and

(7) "School Committee" means a committee constituted under section 7.

Voluntary Primary Education

3. Within one year from the commencement of this Act or within such other period as may be prescribed by the Local Government in this behalf, the Commissioners shall submit to the Local Government a detailed statement, in such form as may be prescribed by the Local Government, containing the following particulars in respect of the Municipality:—

- (a) (i) The number of children, not being less than six or more than eleven years of age, within the Municipality;
- (ii) the number of boys, not being less than six or more than ten years of age, therein;
- (b) the school accommodation for the staff of, and the attendance at, existing primary schools;
- (c) the school accommodation, staff and equipment required if suitable and adequate provision were to be made for the primary education of—
 - (i) all children referred to in clause (a) (i) likely to attend primary schools voluntarily; and

- (ii) all boys referred to in clause (a) (ii) ;
- (d) the manner in which and the periods within which it will be possible to provide the necessary school accommodation, staff and equipment referred to in clause (c) under the direct management and control of the Municipality;
- (e) the existing expenditure incurred by the Municipality on primary education and the expenditure to be incurred yearly in order to provide such school accommodation, staff and equipment;
- (f) the receipts already available, and the income including the probable receipts from any education cess that may in future be levied under Section 17, which it may be estimated will be available to meet such expenditure; and
- (g) the amount of grant or assistance from the Government which the Commissioners consider would be necessary to enable them to provide for primary education within the Municipality, or any part thereof.

4. The Local Government, after considering the statement required by section 3 and the conditions and resources of the Municipality, and after determining the amount of financial assistance from the Government which may be necessary in order to provide for primary education within the Municipality, may, if satisfied that the Municipality is able to meet the expenditure involved, direct the Commis-

sioners to provide the necessary school accommodation, staff and equipment for all children, not being less than six or more than eleven years of age, likely to attend primary schools voluntarily within the Municipality and to assume the direct management and control of all such schools.

Compulsory Primary Education

5. The provisions of this Part shall not come into operation until a notification has been issued under Section 6, sub-section (2).

6. (1) If, after complying with the directions of the Local Government under section 4, the Commissioners are of opinion that the primary education of all boys, not being less than six or more than ten years of age, should be made compulsory within the Municipality, or any part thereof, they may apply to the Local Government, in such manner as may be prescribed by rules made by the Local Government, for permission to introduce therein compulsory primary education for such boys.

(2) The Local Government, after considering the application and after determining the financial assistance from the Government which may be necessary to provide for compulsory primary education within the Municipality, shall, if satisfied that the Municipality is able to meet the expenditure involved, grant the permission asked for, and the Commissioners shall thereupon cause a notification to be issued declaring that primary education shall be compulsory for all such boys within the Municipality, or any part thereof, as the case may be.

(3) Every notification issued under this section shall be published in the *Calcutta Gazette* and in the local newspapers, if any, and shall be posted up at the Municipal office and at such other places, as the Commissioners shall deem necessary, specifying the date on and from which primary education shall be compulsory within the Municipality, or any part thereof.

(4) No notification shall be issued by the Commissioners under this section except in pursuance of a resolution passed at a special general meeting convened for the purpose and at which not less than two-thirds of the total number of Commissioners are present.

7. When a notification has been issued in any Municipality under section 6, sub-section (2), the Commissioners shall appoint a School Committee, to be constituted in such manner as may be prescribed by rules made under section 15:

Provided that a Deputy Inspector or a Sub-Inspector of Schools, at least one Commissioner and one or more residents of the Municipality, other than a Commissioner, shall be members of the Committee.

8. (1) In every area to which the provisions of this Part apply, it shall be the duty of the guardian of every boy, not being less than six or more than ten years of age, residing within that area to cause such boy to attend a recognized primary school unless, in the opinion of the School Committee, there is a reasonable excuse for his non-attendance.

(2) Any of the following circumstances shall

be deemed to be a reasonable excuse within the meaning of this section:—

- (a) that there is no recognized primary school within a distance of one mile, measured by the shortest route, from the residence of the boy which he can attend, and to which the guardian has no reasonable objection to send the boy;
- (b) that the boy is prevented from attending the school by reason of sickness, infirmity, domestic necessity, the seasonal needs of agriculture or of his being the sole breadwinner of his family;
- (c) that the boy is receiving education in some other satisfactory manner.

9. (1) If the School Committee is satisfied that a guardian who is required under section 8 to cause a boy to attend a recognized primary school, has failed to do so, it shall, after giving a warning in writing to such guardian, apply to a Magistrate for an order to compel the guardian to enforce the attendance of such boy; and the Magistrate shall fix a day for the hearing of the application and cause notice thereof to be given to such guardian.

(2) On the day fixed for the hearing of the application or on any subsequent day to which it may be adjourned, and after hearing the guardian or his authorized agent, if present, the Magistrate, if satisfied that the facts alleged in the application are true, may pass an order directing the guardian to cause such boy to attend a recognized primary school from a date to be specified in such order.

10. (1) Any guardian who fails to comply with an order passed under section 9 shall, on conviction before a Magistrate, be liable to a fine not exceeding five rupees, and also to a recurring fine not exceeding one rupee for each day after the first during which he continues so to offend.

(2) No Magistrate shall take cognizance of an offence under this section except on the complaint of the School Committee.

11. No person shall, without the permission of the School Committee, employ any boy, not being less than six or more than ten years of age, who is required to attend a recognized primary school under this part :

Provided that such permission shall not be necessary if the employment of the boy does not interfere with his attendance at such school.

12. (1) The School Committee may prosecute any person who, after due warning, contravenes the provisions of section 11.

(2) Unless such person satisfies the Magistrate that there is a reasonable excuse, within the meaning of section 8, sub-section (2), for the non-attendance of the boy, or that the time and nature of employment of the boy are such that he is not prevented from attending a recognized primary school, or that the boy was taken into employment under false representations as to age, residence and other conditions, such person shall, on conviction before a Magistrate, be liable to a fine not exceeding twenty rupees.

13. An application to a Magistrate under

section 9 or a complaint to a Magistrate under section 10 or section 12, may be made on behalf of the School Committee by such person as may be authorized by the School Committee by general or special order in this behalf.

14. When primary education has been made compulsory in any Municipality, or any part thereof if a guardian, who is required under the provisions of this Part to cause a boy to attend a recognized primary school, satisfies the School Committee that he is unable to pay the fees or any part of the fees ordinarily charged in such school, such boy shall be admitted to such school free of charge, or at such reduced fees as the School Committee may determine, for the period during which the guardian is required to cause the boy to attend a recognized primary school.

15. The Commissioners may, with the previous sanction of the Local Government, make rules prescribing—

- (a) the manner in which the School Committee shall be constituted, the number of its members, its duties and its mode of transacting business;
- (b) the steps which the School Committee may take to secure the attendance of boys at school.

16. The Local Government may, by notification in the *Calcutta Gazette*, exempt any class of persons or any community, in any area to which this Act extends, from the operation of this Part.

Education Cess

17. (1) If the existing resources of any Municipality including any grant from the Government, are not sufficient to cover the cost of primary education within the Municipality, the Commissioners may, with the previous sanction of the Local Government, impose a tax, to be called the "education cess"; and all amounts derived therefrom shall be devoted solely to the purposes of primary education, whether voluntary or compulsory, within the Municipality.

(2) An education cess shall not be imposed unless the Commissioners by a resolution, passed at a special general meeting convened for the purpose and in favour of which two-thirds of the Commissioners have voted, determine to impose such cess.

(3) The education cess shall be levied in such manner as may be prescribed by rules made by the Local Government, and the cess so levied shall be a rate amounting to the sum required, after deducting the Government grant, the school receipts and the receipts from endowments and contributions, to meet the expenditure on primary education, together with ten *per cent.* above such sum to meet the collection charges and the probable losses due to non-realization from defaulters.

Compulsory Primary Education of Girls

17-A. The provisions of this Act relating to the compulsory primary education of boys shall apply

mutatis mutandis to the compulsory primary education of girls not being less than six or more than ten years of age:

Provided that before making the application referred to in sub-section (1) of section 6 the Commissioners shall submit to the Local Government a statement containing in respect of girls within the municipality such of the particulars set forth in section 3 as the Local Government may think fit to require, and shall comply with such directions for the provision of accommodation, staff and equipment and for the management and control of schools as the Local Government may issue thereon :

Provided also that in the case of an application to introduce compulsory primary education for girls the Local Government may if it thinks fit refuse the permission referred to in sub-section (2) of section 6.

Supplemental

18. (1) The Local Government may, after previous publication, make rules to carry out the purposes of this Act.

(2) In particular, and without prejudice to the generality of the foregoing power, the Local Government may make rules prescribing the manner in which—

(a) applications under section 6, sub-section (1), shall be made; and

(b) the education cess shall be levied.

(3) All rules made under this section shall be published in the *Calcutta Gazette*.

19. All primary schools maintained by the Commissioners within a Municipality, or any part thereof, under the provisions of this Act shall be open to inspection free of any charge by the inspecting officers of the Education Department of the Local Government and such other persons as the Local Government may appoint in this behalf.

20. Every person authorized by the School Committee under section 13 and every officer and servant of the School Committee, shall be deemed to be a public servant within the meaning of section 21 of the Indian Penal Code.

21. When, in the opinion of the Local Government, the Commissioners have made default in any of the requirements of Part III of this Act, the Local Government may, after considering any explanation of the Commissioners, by a notification in the *Calcutta Gazette*, stating the grounds of such order, cancel any notification which has been issued under section 6, sub-section (2).

CHAPTER VI

EDUCATION IN THE UNITED PROVINCES

The United Provinces with a population of over 48 millions has 5 Universities, the Allahabad University, the Lucknow University, the Agra University, the Hindu University Benares and the Muslim University Aligarh. The University of Allahabad was first constituted as an affiliating University in 1887 and was recognised as a unitary teaching residential University in 1921. At the same time it exercised control over the affiliated colleges. Since 1927 these colleges have been transferred to the new Agra University which is purely an affiliating and examining body. The Benares University was constituted in 1916, and the Lucknow University and the Muslim University in 1920. All these are unitary, teaching and residential universities. All the 5 Universities combined had in 1935-36 about 10,000 students.

Government maintains an Engineering College at Roorki, an Agricultural College and a Technological Institute at Cawnpore, and a Medical College at Lucknow, besides 3 training colleges for teachers.

Educational institutions of all kinds in the United Provinces numbered 24,573 in 1935-36. For second-

dary education there were 1,478 institutions with 2,53,822 scholars; and for primary education 20,313 schools with 12,64,265 scholars. On March 31, 1936, the technical and industrial schools of all kinds numbered 90 and had 3,586 students on their roll. There were 2,269 institutions for girls with 1,36,414 scholars. There was compulsory Primary Education in 36 municipalities, Government supplying two-thirds of the extra-cost involved. The percentage of scholars to the population was 5·3 for males and 0·9 for females. Government contributed 53·1 per cent of the total cost of education of the Province in the year 1935-36 which was Rs. 3,89,49,169.

In 1916 there were only 11,540 recognised primary schools with an enrolment of 6,28,542 scholars. The corresponding figures for the year 1921 and 1926 were 16,368 schools with 8,48,356 scholars and 19,797 schools with 10,51,620 scholars respectively.

In 1916 the total expenditure on primary schools from all sources was 27 lakhs and in 1921 it was 51 lakhs and in 1926 it had risen to 80 lakhs. It has since further enormously increased. In 1916 the percentage of expenditure on primary education to the total expenditure on education was 19·4 in 1921 it was 21·3 and by 1926 it was 25·8.

The main provisions of the United Provinces Primary Education Act, 1919 are summarised below :—

(a) It extends only to the municipalities of the United Provinces to enable them to introduce compulsory primary education in urban areas, for

all children between six and eleven years of age.

(b) Primary education of male children shall first be made compulsory in the whole or any part of the municipality; later on, on the application of the municipal board the Government may notify that primary education of female children shall be compulsory.

(c) Such compulsory primary education shall be free of charge.

(d) The municipal boards are the educational authorities in their respective areas, but they shall appoint school committees to enforce provisions respecting the attendance of children at school and the employment of children and shall determine their other duties, powers and responsibilities.

(e) The Government may exempt any particular class or community from the operation of this Act.

(f) The municipal board may impose a tax called the education cess, the proceeds of which shall be devoted solely for primary education; the board may levy the education cess by imposing a new tax or by increasing any tax which is already levied, and in the latter case, the income derived from the increase shall be deemed to be the proceeds of the education cess.

(g) The Government may make rules prescribing the range of instruction in primary schools, determining generally what shall be considered to be adequate provision for compulsory primary education free of charge, and defining the conditions on which the Government will bear a share of the cost of providing primary education.

The District Boards Primary Education Act which was passed in 1926 made similar provisions for the compulsory education in rural areas.

The whole question of the reorganisation of education in the United Provinces is under the consideration of the Government and various committees are meeting to discuss and formulate new policy.

Special provisions have been made in the United Provinces Budget 1937-38 for the expansion of literacy amongst masses.

A sum of 10 lakhs has been provided for a campaign against illiteracy and also for better provision in the existing schools. It is proposed to try the Wardha scheme in suitable centres and skilled instructors will be appointed for the purposes of giving training at the training institutions. It is also contemplated to establish circulating libraries in selected centres in every district. The district boards will be encouraged to make provision for refreshments for ill-nourished children in the primary schools in a few selected centres. Physical training will also be encouraged and an allotment will be made for the purpose. More extensive use will be made of magic lanterns and of other methods of demonstration by instructors for the purpose of dispelling ignorance which abounds in the countryside. The Education Department in co-operation with the district boards and other suitable agencies will be able to devise suitable schemes for the purpose.

CHAPTER VII

EDUCATION IN THE CENTRAL PROVINCES

The Central Provinces with a population of over 15 millions have only one University *viz.* the Nagpur University which was established in 1923. To this the colleges at Nagpur, Jubbulpore, Wardha and Amroti are affiliated. The number of students in these colleges was 2,314 in the year 1935-36. There is a High School Board to supervise secondary education. The number of male students in the secondary schools was 1,16,962 in the same year. There is also an Engineering School at Nagpur with 125 students. The Agricultural College at Nagpur had 134 students during the same year.

There were 4,276 recognised primary institutions for boys with 3,14,140 pupils in 1935-36, and 470 primary institutions for girls with 37,236 girls. In 1926 the total number of recognised primary schools was about 4,000 with about 2,77,972 pupils. In 1916 the total expenditure on primary education was 25'95 lakhs, in 1921 it was 25'39 lakhs and in 1926 it increased to 30'33 lakhs. It has since enormously increased. In 1916 the percentage of expenditure on primary education to the total expenditure on education was 33'3, in 1921 it was 32'6 and in 1926, it was 29'5 per cent.

The Central Provinces Primary Education Act was passed in May, 1919. It provided for the introduction of compulsion for boys and girls in municipal and rural areas. Several municipalities and rural areas have since introduced compulsory Education.

The question of a thorough re-organisation of the system of education in Central Provinces has received foremost attention since the acceptance of office by the Congress in the Central Provinces, more particularly under the able guidance of the Hon'ble R. S. Shukla who is now the Premier of the Province. The re-organisation plan includes the well-known Vidya Mandir Scheme which is at once a model and a practical ideal for the expansion of primary education amongst the illiterate masses not only of the Central Provinces but those of the whole of India. The real importance of the scheme would be understood more with the approach of times and the example of Central Provinces with certain local adaptations is bound to be useful to all the provinces of India.

THE VIDYA MANDIR SCHEME

In a historical retrospect the Scheme traces early education in India.

"In ancient India the primary duty of rulers was to look after the social well-being of the people. Famous seats of learning like Takshashila and Naland are landmarks in the ancient history of India. They always remind us that ancient Hindus were great

admirers of learning and helped with grants and endowments gigantic institutions which diffused learning to thousands for centuries past. It will now serve no useful purpose to give details of all these institutions. Education was, however, widely diffused at the time when the Britishers came to India. Two sets of parallel schools were found in existence in the land the parishads, tols and pathshalas of the Hindus on one hand and maktab and madrasas of the Muslims on the other. Parishads were institutions of the learned and elders; tols were mostly confined to primary school instruction of the Brahmins; and pathshalas were the real elementary schools imparting instruction to all and were very numerous throughout the country. Maktab were schools which were attached to mosques and were primary schools of our Muslim brethren and madrasas were their secondary and collegiate schools for higher learning.

From 1814 till 1825 money was spent mostly for higher studies, but the struggle went on till 1885 when the fateful Despatch of Lord Macaulay was written, and the following policy was laid down, in the words of Macaulay, -

“We must at present do our best to form a class who may be interpreters between us and the millions whom we govern—a class of persons, Indian in blood and colour, but English in tastes, in opinions, in morals and in intellect.”

It is now admitted on all hands that Macaulay made a great mistake in imagining that western education would assimilate Indians to Englishmen in

everything but their complexion. Lord Curzon, nearly 70 years after Macaulay's declaration admitted that "Ever since the cold breath of Macaulay's rhetoric passed over the field of Indian languages and Indian text-books, the elementary education of the people in their own tongue has shrivelled and pined."

In 1836, 5·8 per cent of the population was found literate. In 1931, it was 8 per cent. In 100 years literacy has gone up by 2·2 per cent. In the last 30 years in our province it has advanced only by 1 per cent. This state of affairs cannot be allowed to continue any longer. *To bring about intellectual and national revolution, spread of education in cent per cent of population is essential and must be brought about within a fixed period.* It is admitted on all hands that an uneducated populace is dangerous for any form of government and more so for a democratic government. Great educationists all over the world have advocated free and compulsory education for the masses. When the great European war was going on the Right Hon'ble A. H. L. Fisher moved for an increased grant in the House of Commons for elementary education. He supported his demand with a historic speech regarding it as national investment worthy of being made even in that great hour or crisis for the British Empire."

The authors of the Scheme then appeal for the co-operation of the people and the Government to remove the illiteracy of masses and suggest that the only way to achieve the end lies in the adoption of the Vidya Mandir Scheme which is as follows :—

“The scheme contemplates that—Every village or group of village or group of villages within a radius of a mile having no schools and where about 40 boys and girls of school-going age are available shall have a Vidya Mandir.”

The name “Vidya Mandir” is intended to do away with the prejudice attaching to the present-day schools and distinguish new schools from the existing ones till all of them are converted into Vidya Mandirs. The name does not indicate, as some think, a temple having an idol or an image set up in it for worship. The word “Mandir” literally and truly means a house such as Arogya Mandir, Jnan Mandir, Udyoga Mandir, Nyaya Mandir, etc. Vidya Mandir, therefore, means nothing more or nothing less than a house of learning. In all Vidya Mandirs, education shall be through the medium of the mother-tongue. We shall have, therefore, Marathi Vidya Mandirs, Hindi Vidya Mandirs and Urdu Vidya Mandirs, according to the needs and circumstances of the residents of each place where Vidya Mandirs are founded. The name is attractive in more ways than one. To the 99 per cent of the population in villages, it will be a source of inspiration, and it is hoped that it will appeal to their generous and charitable minds.

Aims and objects. In the revised primary syllabus for this province, a faint attempt has been made for the first time to define the aims of primary education. The first and most prominent aim is stated to be “Ensuring literacy of such a type that it will not lapse after the pupils have left the schools.”

It is also further stated that "the primary education should lead to the formation of healthy and hygienic condition of body and mind and provide instructions in subjects which will give the pupil a living interest in his environments."

Vidya Mandirs will no doubt accomplish all this, and much more than this.

18. Vidya Mandir will be a people's school.

(i) It shall not be divorced from the environments in which it will be situate. Such a school should make children realize the problems of village life and train them to take part in it effectively when they have finished their school career.

(ii) Not only it should reflect on all the characteristics of the village life, but it should prepare the village boys and girls for the life's struggle in relation not only to the village or the town or the district or the province, but to the country as a whole. It must have a national outlook.

(iii) The welfare of the village community shall be one of the Vidya Mandir's principal aims, and there shall be close co-ordination between the school and the community life, so much so that the people of the village may begin to feel that the school is their institution and their own concern. It shall be an important social centre where teachers, parents, boys and girls shall meet and discuss and solve the problems with which they are faced—national, social as well as educational.

(iv) In fact, Vidya Mandir shall be a radiating source of light and learning in a village and it will serve as a model for all round progress. Agri-

culture, hygiene, sanitation and all things, which make up for the happiness of life of an individual and nation as a whole, will be taught there.

Beginning:—It shall be established on a voluntary basis first and, if proved successful, it would become a statutory obligation on each village or a group of villages to have a Vidya Mandir. It is expected that proprietors of mahals or states shall take the initiative in establishing Vidya Mandirs generally, but it is open to a generous-minded tenant in the village or a ryot in a ryotwari tract to do the same. Anyone who is interested in rural welfare may also donate money sufficient to secure the establishment of a Vidya Mandir.

Finance:—The necessary condition of the establishment of a Vidya Mandir is—

(1) *Grant of land* sufficient in area to give the teacher a living wage according to the locality in which the school is situate. Living wage will ordinarily mean about Rs. 15 per mensem. The area of the land will differ from village to village and tract to tract. But generally the net income out of this land should be about as 200 a year.....
“The grant of land will be the primary and the main source of income for the support of a Vidya Mandir.”

(2) There are *other sources* from which income can be augmented—

(a) All the charities in a village on festive and other occasions should be diverted to Vidya Mandirs.

(b) Merchants, traders and others, who have

with them money collected from village people as Dharmadao, should be called upon to devote a good share of their collections towards Vidya Mandirs.

(c) Another source of income and an important source will be panchayati kothis, which will bring certain income to Vidya Mandirs. Panchayati kothis may be called grain banks of villages. In these grain banks cultivators may deposit a part of their income in kind every year at the time of harvest. The yearly contribution which each cultivator makes to build up the stock may depend on the area cultivated by each or the number of ploughs he uses to cultivate his area. The stock is or will be administered by panchas who will be elected by the subscribers themselves. Any member is entitled to borrow grain from this kothi to a limit fixed for each by the panchas and the borrower would agree to pay back the stock with interest thereon at the time of the next harvest. The beginning is generally small, but its usefulness is generally realized as the stock increases without any undue strain on members. This would be a measure of great self-help.

(d) In every Vidya Mandir education in or through some central industry may be given. This will also augment the income of Vidya Mandirs to a certain extent.

(e) In the event of famine or scarcity calling for Government help, if the endowment funds are not able to support Vidya Mandirs, Government's assistance can always be relied on. It is needless to dilate upon this point.

It will thus be seen that, if the aforesaid resources are tackled, there is absolute certainty of Vidya Mandirs being placed on a suitable and sound financial basis.

Procedure and Rules:—As stated above, Vidya Mandirs, to begin with, have to be started on a voluntary basis. As soon as an offer is made, a responsible officer of the Agriculture Department will be deputed to examine the land and submit a report stating the quantity required to give an annual net income of about Rs. 200. The report shall state also the productive capacity, cost of cultivation and rental valuation of the land. It shall also state what initial capital outlay will be required in the first year. The report shall also deal with the selection of site of the Vidya Mandir and the extent of co-operation of the villagers for the purpose of erecting Vidya Mandirs. If everything is found satisfactory, the Agriculture Department shall take charge of the land. Looking from all points of view, it appears that direct control and management of the Vidya Mandir land and its cultivation for the first few years should be in the hands of the Agriculture Department. Where there is a village panchayat, it shall be its duty to appoint a sub-committee of its own for the proper supervision and management of Vidya Mandirs. Rules shall be framed making provision for the following:—

- (i) Number of elected members of the managing committee,
- (ii) number of co-opted members,
- (iii) *ex-officio* members,

- (iv) procedure of election on adult franchise basis,
- (v) management and cultivation of land,
- (vi) maintenance of accounts of receipts and expenditure and annual audit.
- (vii) management of Vidya Mandirs.
- (viii) office-bearers,
- (ix) duties and obligations, of the office-bearers and members of the committee.
- (x) supervision, inspection and control.

Property.—Property, both movable and immovable, shall vest in the village panchayat or district council, or ultimately in the Provincial Government. Legislation on the lines of the charitable Endowments Act, 1890, shall have to be introduced to give validity to the gifts made and insure proper administration and control.

Capital outlay.—(a) A limited number of Vidya Mandirs shall be started in every tahsil or taluq in the first year at Government expense, for which provision should be made in the budget for 1938-39
.....

(b) If more offers are received than can be financed by the Government, land mortgage banks and co-operative central banks should be authorized to advance money, which may be repaid by long-term instalments on the security of the land guaranteed by the Government.

(c) It is also possible that some charitable institutions or generous-minded donors may take upon themselves to meet the initial expenses. Such Vidya

Mandirs should also be started and the pay of teachers of the first year should be paid by the Government or the district councils, if they are found able to do so.

Buildings.—Arrangements shall be made for the construction of a simple type of building of a Vidya Mandir according to the needs of the place where it is situate.....It should not ordinarily cost more than Rs. 200 or Rs. 250. All facilities shall be given for its construction. If forest is situate nearby, materials available may be given free. A big building is not necessary. Children shall be given instructions in verandahs of the building or in the open air under the shade of a tree if need be. It would be a matter of lasting glory if teachers and pupils can boast of constructing their own Vidya Mandir building. In this connection, it would be interesting to know how in Ushagram in Bengal buildings much bigger perhaps and double-storeyed have been constructed by the teachers and students.

.....

Staff.—An important, if not the most important, item in the scheme of Vidya Mandir is the staff. A Vidya Mandir is generally expected to be one-teacher institution inasmuch as only boys and girls of the village, where it is situate, shall join it. The number of boys and girls in each Vidya Mandir is not likely to be more than 50 at the most. Even if the number exceeds this limit and goes even to 80, double shift system may be adopted or the old monitor system can be resorted to. A teacher of a Vidya Mandir shall have to be of a different type.

His minimum qualifications shall be the present vernacular middle school certificate. Higher the qualification, the better. He shall require special intensive training, and provision shall have to be made for it. The course and the period of training may be settled by a sub-committee appointed for the purpose.

Pledge:—The teacher shall be required to sign a pledge which shall indicate what he is expected to be.

Conditions of service:—In the pledge, the following conditions of service shall be incorporated:—

- (i) Probation for five years, and if work is found satisfactory, confirmation will follow. After confirmation the teacher shall have to serve for 20 years more.
- (ii) There shall ordinarily be no transfer from one Vidya Mandir to another. It shall be a life-long work for 25 years and if at any time the teacher misconducts himself, or does anything which in the opinion of the committee, disqualifies him to continue as a teacher in the Vidya Mandir, his services will be dispensed with after due notice. The period of such notice will be fixed by rules.
- (iii) The remuneration of a teacher of a Vidya Mandir shall be paid out of the endowment funds and ordinarily shall not be less than Rs. 15 per mensem in value. If the endowment prospers, he may be given more. After confirmation his life shall be insured for Rs. 500 or thereabout. The policy shall be endowment

policy or any other policy as may be decided upon by the committee. The teacher shall give a declaration as to whom the amount at the policy shall be given in case of his death just as is done in the case of provident fund amount. The policy shall be assigned to the president or secretary of the committee or the trust of a Vidya Mandir, or to the district council or Government.

Duties and obligations:—Duties and obligations of a teacher shall be—

- (i) to reside in the Vidya Mandir and educate children of a village according to the syllabus and curriculum prescribed;
- (ii) to be *ex-officio* secretary of a Vidya Mandir trust or committee and to maintain its regular accounts;
- (iii) to be in such charge of the property of a Vidya Mandir as the committee or trust may like;
- (iv) to do such social service, village uplift work, education, as may be entrusted to him;
- (v) to look after the physical uplift and welfare of children of a village;
- (vi) to be a keeper of village library and museum;
- (vii) to give national outlook to all the activities of a village; and
- (viii) to perform such other duties as may be prescribed from time to time.

Subjects of study:—Subjects of study shall be related to the environments of children and shall have an industrial and agricultural bias. A suitable syllabus is in the course of preparation. *Mahatma Gandhi's scheme and our provincial syllabus and reports of various committees, vocational and otherwise, will be carefully examined, and courses of studies for four or seven years, adapted according to the provincial needs and circumstances, will be prescribed.

Vidya Mandir and Government departments:—Vidya Mandirs are expected to be centres of all activities in villages to which the attention of all the departments of Government besides the Education Department shall have to be directed. As at present there is no co-ordination between one department and another, and as a consequence the result of their activities is not even visible. It shall be the duty of the Agriculture Department to see that the best use is made of the land endowed to Vidya Mandir and its productive capacity is so enhanced that a Vidya Mandir farm shall serve as a real demonstration farm to villagers and improve their cultivation and general well-being. No better service than this the Agriculture Department of the Government can render. Medical and Public Health Departments should also work for Vidya Mandirs and look to the improvement, sanitation, hygiene of villages and help in all possible ways the teachers in charge of Vidya Mandirs to do social service in villages.

* Reproduced in Part III

Teachers of Vidya Mandirs can be acquainted with the knowledge of first aid and elementary medicines to enable them to render immediate help to villages. The Co-operative Department should start multi-purpose societies of the Kodinar type in every village where a Vidya Mandir is established, Veterinary Department should make it a point to concentrate its attention on Vidya Mandir cattle and demonstrate the department's usefulness. Thus, if all departments of Government connected with village life and its improvement co-ordinate and work in co-operation, Vidya Mandirs shall be a source which in the near future will make village life interesting and happy and relieve the people from their poverty and misery in which they are living today.

Conclusion:—In the words of Thomas Munro written in his minute as far back as 1826 “Whatever expense the Government may incur on education of the people will be amply repaid by the improvement of the country; for the general diffusion of knowledge is inseparably followed by more orderly habits, by increasing industry by, by a test for comforts of life, by exertion to acquire them and by the growing prosperity of the people.” Government feels convinced that if Government servants and the people both combine and co-operate and make a joint effort, success of the scheme will be amply demonstrated even at the end of the first year of its inauguration. Nothing can then prevent the free and compulsory education of all boys and girls

within a fixed period. If proprietors of mahals and estates really desire their own prosperity and the prosperity of their children and children's children, they should generously come forward and make a voluntary offer of the required land before the law makes its obligatory for them to do so. Let owners or holders of mathematics, big and small, and of other religious or charitable institutions, temples, mosques and others realize that time has come in the history of India when they should voluntarily come forward and make the offer and get the credit before it is too late. All merchants, traders and sahu-kars, who have accumulated with them large sums of Dharmadaro, should give voluntarily to the Vidya Mandirs at least 10 per cent of it and create a Vidya Mandir Fund for facilitating their establishment. Let all others, including Government pensioners who can and who have the will to help in any way, come forward and make this venture a success.

Success of Vidya Mandirs is sure to relieve unemployment of the educated and give them undreamt of and unique opportunity of rendering service to the motherland. Let individuals as well as associations, political and social, all come forward to help this noble cause."

CHAPTER VIII

EDUCATION IN PUNJAB, BIHAR, ASSAM AND OTHER PROVINCES

The Province of Punjab with a population of 23·58 millions has only one University—the University of Punjab which was constituted as an examining University in 1882. It has since maintained an Oriental College, a Law College and a Library. Since 1920, various departments of University teaching have been added. A college of Commerce was started in 1927. In 1935-36 there were 13,531 male students in Arts Colleges and 5,65,462 students in secondary schools.

There were 3,59,893 pupils reading in primary schools at the close of 1935-36. In the year 1916 there were only 2,75,353 scholars on roll in 5,679 primary schools. The total cost of maintaining primary schools in 1935-36 was Rs. 39,58,800 out of which Government contributed 63·9 per cent, District Boards 15 per cent and Municipalities 14·8 per cent. In 1916 the expenditure on primary schools was only 19 lakhs. The balance was met from fees and other sources. The total expenditure on education was 322 lakhs in 1935-36.

The total number of recognised institutions for girls in 1935-36 was 1932 with 1,53,483 pupils.

Unrecognised institutions were 3,009 with over 6,000 girl students. The expenditure on girls education in the same year was Rs. 29,05,235. The Punjab Primary Education Act was passed in 1919.

The Province of Bihar with a population of over 32 millions has only the Patna University. The Patna University was established in 1917 as an affiliating University. It has 9 Arts and Science colleges, one engineering college, one medical college and one training college in all about 5,000 students. There is also a Veterinary College and other technical institutions. There were 984 secondary schools with 1,61,449 pupils.

The number of pupils in 27,426 primary schools was 8,95,165 at the close of 1934. The expenditure on these primary schools was 55,43,000 out of the total expenditure of Rs. 169 lakhs on education in that year. The number of girls attending schools was 75,960 in addition to those who attended boys schools. The Bihar and Orissa Primary Education Act was passed in 1919.

Assam with a population of 86,22,251 has no University in the Province. It has 4 Arts Colleges with 1,632 students in 1936 affiliated to the Universities of Bengal. There is also a Law College at Gauhati and a number of Intermediate Colleges. The number of secondary schools was 550 with 83,350 pupils. The number of primary schools was 6,002 with 2,91,834 pupils out of which 91,020 were girls students. There were 3,560 pupils in Tea Garden Schools. In 1916 the number of primary schools in Assam was only 4,192 with only 1,86,342 pupils and

in 1921 however the figures rose to 4,407 schools with 1,79,756 pupils. There were 4,674 schools and 2,07,686 pupils at the close of 1926. The total expenditure on education in the same year was over 33 lakhs. The Assam Primary Education Act was passed in 1926.

The North-West Frontier Province with a population of about 2·5 millions had in 1935-36, about 1,006 recognised educational institutions with about 20,000 scholars. The total expenditure on education was over 30 lakhs out of which about 68 per cent was contributed by Government.

Orissa with a population of about 8 millions has 5 colleges in the Province with a strength of about 825 students in 1937. There are 34 High Schools, 124 Middle Schools and 123 special schools. The number of pupils reading in elementary schools was 3,624. The Government of Orissa contributed over 25 lakhs for the education of the Province.

Sind with a population of about 4 millions has only 7 per cent literates.

CHAPTER IX

EDUCATION IN BURMA AND INDIAN STATES

Burma with a population of 1,46,67,149 has only the University of Rangoon which was constituted in 1920. It is a teaching University with two Arts colleges besides a Medical college and a Teachers' Training college. There is also an Agricultural college and a Forest school in addition to a number of other technical institutions.

Higher education is controlled by the University while Anglo-Vernacular and English education are controlled by the Government and Vernacular education is governed by local bodies. In almost every village there is a Buddhist monastery which is the centre of educational activities in a village.

The total number of recognised and unrecognised institutions was 25,804 and the number of pupils was 7,43,785. The enrolments in recognised institutions numbered to a figure which is the highest but one, that for the year 1930-31 (5,45,401), in the history of education in Burma. Since last year there was an increase in the number in every stage of instruction except a small decrease of 105 pupils in the middle stage. In the Lower Primary stage, there were 1,95,144 boys and 1,66,630 girls, in the Upper Primary stage, 62,829 boys and 33,780 girls,

in the middle stage, 32,667 boys and 9,252 girls, in the High School stage, 11,410 boys and 2,366 girls and in the University including Intermediate College, Mandalay, 1,734 men and 385 women. There were 121 Local Education Authorities including 28 District School Boards, 60 Municipalities, 13 Town Committees, and 20 Deputy Commissioners' Local Funds. The total number of schools maintained and recognised by these Local Education Authorities was 5,700. One hundred and forty-three of the schools were Board Schools, the remainder 5,557 recognised aided schools.

The total number of Primary Departments including separate Lower Primary and Upper Primary Schools was 6,219; an increase of 136 on the number for the previous year; the total attendance was 4,58,383; a total increase of 15,736 pupils was recorded in all types of schools. The number of Primary Departments in English Schools was 36 and the attendance was 7,704; an increase of 444 pupils. The number of Anglo-Vernacular Primary Departments was 240; the number of pupils was 22,916. The number of Vernacular Primary Departments was 5,943 the attendance was 4,27,763 (4,12,700) pupils.

The number of Upper Primary Vernacular Schools increased by 86 from 4,511 to 4,597 schools. These schools had 2,93,385 pupils; the increase was 9,630 pupils since last year.

The total number of Lower Primary Vernacular Schools was 246 with 12,184 pupils; the increases were 51 schools and 3,078 pupils since last year.

The total number of pupils who passed the Second Standard course in Vernacular Schools increased from 49,809 to 51,259 and the number who passed the Fourth Standard course increased from 16,427 to 16,662.

Expenditure from all sources on education in 1935-36 was Rs. 1,01,33,219, Rs. 10,56,006 more than in the preceding year. This total includes Rs. 6,64,840 spent on education in the Federated Shan States, Rs. 57,465 spent on buildings by the Public Works Department and Rs. 19,29,490 spent on institutions not controlled by the Education Department.

The expenditure under different heads was:—

- (1) From Provincial Funds Rs. 50,48,857.
- (2) From Rural Local Funds Rs. 32,90,386.
- (3) From Municipal Funds Rs. 14,89,387.
- (4) From Fees Rs. 34,65,306.
- (5) From other sources Rs. 24,29,097.
- (6) From the Federated Shan States Funds Rs. 4,10,186.

The average cost of educating each pupil during the year was Rs. 24·64. The average cost per head in the University (*i. e.*, the Rangoon University and its constituent Colleges including the Intermediate College, Mandalay), was Rs. 787·4 in Secondary Schools Rs. 41·94; in Upper Primary Schools Rs. 7·53; in Lower Primary Schools Rs. 7·38; in Training Schools Rs. 139·12 and in other Special Schools Rs. 21·06.

The average expenditure per head of population

on Education was Rs. 1-1-7, of which Re. 0-11-2 was met from Public Funds.

Much information is not available regarding the progress of education in Indian States. Hyderabad has a population of about 15 millions and has one University, namely the Osmania University. The total expenditure on public instruction in Hyderabad amounted to about 80 lakhs. The number of educational institutions in 1936 was 4,736 with 3,51,902 pupils. There were in that year 7 arts colleges including one for women and 3 professional colleges. Mysore has a population of over six millions and has its own University with 8 constituent colleges and a medical school with a total strength of 2,812 students. The number of educational institutions, public and private, on March 31, 1936 was 7,794 with 3,23,676 scholars.

Kashmir has a population of over $3\frac{1}{2}$ millions. Primary education in the cities and 4 notified areas of the State has been made compulsory. The State has in all 1,392 educational institutions with 92,658 pupils including 14,357 girls. Gwalior with equal population has 1,411 educational institutions with 76,937 pupils. These figures include two colleges, 9 high schools. There is also a technical school at Lashkar.

Baroda has a population of about 205 millions. In 1893 compulsory and free primary education was tentatively introduced by the Baroda Government in one district and since August 1906 has been made universal in the whole state. In addition to the Baroda College there are several high schools,

anglo-vernacular schools, and numerous vernacular schools throughout the State. There is also a well-equipped technical school at Baroda, and various industrial schools in the districts of the State.

Travancore one of the most important South Indian States is in the forefront in point of literacy and female education, the percentage of literacy being as high as 41 for males and 17 for females as against an average of 16 and 3 respectively for All-India. There are five First Grade Colleges and two Second Grade Colleges affiliated to the Madras University. There is also a Law College, a Teachers' Training College, a Sanskrit College and a College of Ayurveda.

PART III
THE WARDHA EDUCATION COMMITTEE
REPORT

CHAPTER X

THE WARDHA EDUCATION COMMITTEE REPORT

After the assumption of office by the Congress in the seven provinces of India, the question of overhauling the system of education received greater attention by all interested in the welfare of the country. Important educationalists, education ministry of the 7 Provinces and prominent personalities, therefore met on the 22nd and 23rd October, 1937 in the All-India National Education Conference at Wardha under the presidentship of Mahatma Gandhi. This Conference, commonly known, as the Wardha Educational Conference discussed the various problems in connection with the expansion of education and passed the following resolutions :—

“(1) That in the opinion of this Conference free and compulsory education be provided for seven years on a nation-wide scale.

(2) That the medium of instruction be the mother-tongue.

(3) That the Conference endorses the proposal made by Mahatma Gandhi that the process of education throughout this period should centre around some form a manual and productive work, and that all the other abilities to be developed or training to be given should, as far as possible, be integrally re-

lated to the central handicraft chosen with due regard to the environment of the child.

(4) That the Conference expects that this system of education will be gradually able to cover the remuneration of the teachers."

Thereafter a committee composed of the following gentlemen was appointed by the Conference to formulate a scheme of basic education and to prepare a detailed syllabus on the lines suggested by the above resolutions :—

1. Dr. Zakir Husain, (Chairman);
2. Sjt. Aryanayakan, (Convener),
3. Sjt. Khawaja Gulam Saiyuddin;
4. Sjt. Vinoba Bhave;
5. Sjt. Kakasaheb Kalekar;
6. Sjt. Kishori Lal Mashruwala;
7. Sjt. J. C. Kumarappa;
8. Sjt. Shrikrishna Das Jaju;
9. Sjt. K. T. Shah;
10. Shrimati Ashadeve.

With power to co-opt more names.

The committee submitted their report on the 2nd December, 1937. The Report is reproduced in the subsequent pages; and the syllabus in part IV of this book.

To,

MAHATMA GANDHI,

President,

All India National Education Conference,

WARDHA.

Mahatmaji,

I have the honour to submit herewith the report of the Committee appointed by the Wardha Conference on the 23rd of October, 1937 to formulate a scheme of basic education on the lines suggested by the resolutions of that Conference.

The members of the Committee present at Wardha had a preliminary discussion with you on the 24th October. The Committee met at Wardha on the 2nd and 3rd of November when all the members attended except Professor K. T. Shah who was prevented by urgent work from coming. They met again at Wardha on the 22nd, 23rd and 24th of November. Professor Saiyadain could not come, and Professor K. T. Shah could be present only on the first day of the meeting. You will be pleased to know that the discussions were conducted in the most cordial spirit and every member was anxious to contribute his very best. We recorded no evidence, but the Committee are extremely grateful to the numerous friends who sent us their views on the problems engaging our attention.

We are fully conscious of the shortcomings of the report we are submitting. Our own limitations as well as the limitations of time did not permit us

to do better. We have been able, for instance, to include a detailed syllabus only for the craft of Spinning and Weaving. If time had permitted, we would have very much liked to include a similar scheme for more crafts. For we are anxious to avoid the possible impression that we do not attach equal importance to other crafts with similar or better educational possibilities. When at a later date we submit to you a detailed scheme of correlated grade placements, as desired by you, we hope also to include a detailed scheme of Agriculture and Gardening as the basic craft.

We are thankful to the many Provincial Governments for sending us all the relevant literature, and specially to the Government of Central Provinces for deputing an officer of the Educational and an officer of the Agricultural Department to help us whenever we needed their help during the course of our deliberations. Sjt. Aryanayakam and Shrimati Ashadevi, though members of the Committee, deserve to be specially thanked for facilitating the work of the Committee by their efficient handling of the voluminous correspondence and making all necessary arrangements for the meetings we held.

I am personally very grateful to the Staff of the Teachers' Training College, Muslim University, Aligarh, for their whole-hearted co-operation and for permitting me to draw freely on their expert knowledge and precious time.

We submit this report to you in the sincere hope that under your guidance the scheme presented in

it may prove to be the beginning of a sound educational system in our country.

Respectfully,
ZAKIR HUSAIN,

DELHI, 2nd December, 1937.

Chairman.

SECTION I. BASIC PRINCIPLES

The Existing Educational System

Indian opinion is practically unanimous in condemning the existing system of education in the country. In the past it has failed to meet the most urgent and pressing needs of national life, and to organise and direct its forces and tendencies into proper channels. To-day, when quick and far-reaching changes are reshaping both national and international life and making new demands on the citizens, it continues to function listlessly and apart from the real currents of life, unable to adapt itself to the changed circumstances. It is neither responsive to the realistic elements of the present situation, nor inspired by any life-giving and creative ideal. It does not train individuals to become useful productive members of society, able to pull their own weight and participate effectively in its work. It has no conception of the new co-operative social order which education must help to bring into existence, to replace the present competitive and inhuman regime based on exploitation and violent force. There is, therefore, a demand from all sides for the replacement of the present system of education by a more constructive and

human system, which will be better integrated with the needs and ideals of national life, and better able to meet its pressing demands.

Any scheme of education designed for Indian children will in some respects radically differ from that adopted in the West. For, unlike as in the West, in India the nation has adopted non-violence, as the method of peace, for achieving all round freedom. Our children will therefore need to be taught the superiority of non-violence over violence.

Mahatma Gandhi's Leadership

In this field as in so many others, far-sighted leadership has come at this critical juncture from Mahatma Gandhi, who has thrown himself wholeheartedly and devotedly into the question of evolving a system of education which will be in harmony with the genius of the Indian people, and solve the problem of mass education in a practicable way and within as short a time as possible. The basic idea of his scheme, as expounded by him in his articles in HARIJAN and at the Wardha Educational Conference, is that education, if sound in its principles, should be imparted through some craft or productive work, which should provide the nucleus of all the other instruction provided in the school. This craft, if taught efficiently and thoroughly, should enable the school to pay towards the cost of its teaching staff. According to him, this would also help the State to introduce immediately the scheme of free and compulsory basic education. Failing this, in the existing poli-

tical and financial condition of the country, the cost of this education would be prohibitive.

Craft Work in Schools

Modern educational thought is practically unanimous in commending the idea of educating children through some suitable form of productive work. This method is considered to be the most effective approach to the problem of providing an 'integral' all-sided education.

Psychologically it is desirable, because it relieves the child from the tyranny of a purely academic and theoretical instruction against which its active nature is always making a healthy protest. It balances the intellectual and practical elements of experience, and may be made an instrument of educating the body and the mind in co-ordination. The child acquires not the superficial literacy which implies, often without warrant, a capacity to read the printed page, but the far more important capacity of using hand and intelligence for some constructive purpose. This, if we may be permitted to use the expression, is "the literacy of the whole personality."

Socially considered, the introduction of such practical productive work in education, to be participated in by all the children of the nation, will tend to break down the existing barriers of prejudice between manual and intellectual workers, harmful alike for both. It will also cultivate in the only possible way a true sense of the dignity of labour and of human solidarity—an ethical and moral gain of incalculable significance.

Economically considered, carried out intelligently and efficiently, the scheme will increase the productive capacity of our workers and will also enable them to utilise their leisure advantageously.

From the strictly educational point of view greater concreteness and reality can be given to the knowledge acquired by children by making some significant craft the basis of education. Knowledge will thus become related to life, and its various aspects will be correlated with one another.

Two Necessary Conditions

In order to secure these advantages it is essential that two conditions should be carefully observed. Firstly, the craft or productive work chosen should be rich in educative possibilities. It should find natural points of correlation with important human activities and interests, and should extend into the whole content of the school curriculum. Later in the report, in making our recommendations on the choice of basic crafts we have given special attention to this point, and we would urge all who are in any way concerned with this scheme to bear this important consideration in mind. The object of this new educational scheme is not primarily the production of craftsmen able to practise some craft 'mechanically,' but rather the exploitation for educative purposes of the resources implicit in craftwork. This demands that productive work should not only form a part of the school curriculum—its craft side—but should also inspire the 'method' of teaching all other subjects. Stress should be laid on the

principles of co-operative activity, planning accuracy, initiative and individual responsibility in learning. This is what Mahatma Gandhi means when he says : "Every handcraft has to be taught not merely mechanically as is done to-day, but scientifically. That is, the child should learn the why and wherefore of every process"—of course through personal observation and experience. By merely adding to the curriculum one other subject—weaving, spinning or carpentry—while all other subjects are still taught in the traditional way we shall, we are convinced, encourage passive assimilation and the division of knowledge into unintelligible water-tight compartments, and thus defeat the real purpose and spirit of this scheme.

The Ideal of Citizenship Implicit in the Scheme

We are also anxious that teachers and educationists who undertake this new educational venture should clearly realise the ideal of citizenship inherent in it. In modern India citizenship is destined to become increasingly democratic in the social, political, economic and cultural life of the country. The new generation must at least have an opportunity of understanding its own problems and rights and obligations. A completely new system is necessary to secure the minimum of education for the intelligent exercise of the rights and duties of citizens. Secondly, in modern times, the intelligent citizen must be an active member of society, able to repay in the form of some useful service what he owes to it as a member of an organised civilised

community. An education which produces drags and parasites—whether rich or poor—stands condemned. It not only impairs the productive capacity and efficiency of society but also engenders a dangerous and immoral mentality. This scheme is designed to produce ‘workers,’ who will look, upon all kinds of useful work—including manual labour, even scavenging—as honourable, and who will be both able and willing to stand on their own feet.

Such a close relationship of the work done at school to the work of the community will also enable the children to carry the outlook and attitudes, acquired in the school environment into the wider world outside. Thus the new scheme which we are advocating will aim at giving the citizens of the future a keen sense of personal worth, dignity and efficiency, and will strengthen in them the desire for self-improvement and social service in a co-operative community.

In fine, the scheme envisages the idea of a co-operative community, in which the motive of social service will dominate all the activities of children during the plastic years of childhood and youth. Even during the period of school education, they will feel that they are directly and personally co-operating in the great experiment of national education.

The Self-supporting Basis of the Scheme

It seems necessary to make a few remarks about the “self-supporting” aspect of the scheme, as this

has occasioned considerable misunderstanding. We wish to make it quite clear that we consider the scheme of basic education outlined by the Wardha Conference and here elaborated, to be sound in itself. Even if it is not "self-supporting" in any sense, it should be accepted as a matter of sound educational policy and as an urgent measure of national reconstruction. It is fortunate, however, that this good education will also incidentally cover major portion of its running expenses. We hope to show presently that within the scope prescribed by the Wardha Conference, it can do so to a considerable extent (see the Appendix). The Appendix gives the figures of the contribution to be made towards its own current expenditure by a school with the basic craft of spinning and weaving.

So far as this craft was concerned we had little difficulty in making these calculations, as expert work in this line has been going on for the last seventeen years under Mahatm Gandhi's guidance. The wages in this case have been calculated on the basis of the standard fixed by the All-India Spinners' Association in Maharashtra. In the case of other craft, calculation may be made on the basis of the prevailing market rates. Mahatmaji has definitely suggested that the State should guarantee to take over, at prices calculated as above, the product of the work done by its future citizens in school, a view which we heartily endorse. ".....every school can be made self-supporting, the condition being that the State takes over the manufactures of these schools." (HARIJAN, 31 July, 1937.)

Apart from its financial implications, we are of opinion that a measurable check will be useful in ensuring thoroughness and efficiency in teaching and in the work of the students. Without some such check, there is great danger of work becoming slack and losing all educative value. This is only too obvious from the experience of educationists who from time to time have introduced "manual training" or other "practical activities" in their schools.

But here we must sound a necessary note of warning. There is an obvious danger that in the working of this scheme the economic aspect may be stressed at the sacrifice of the cultural and educational objectives. Teachers may devote most of their attention and energy to extracting the maximum amount of labour from children, whilst neglecting the intellectual, social and moral implications and possibilities of craft training. This point must be constantly kept in mind in the training of teachers as well as in the direction of the work of the supervisory staff and must colour all educational activity.

SECTION II. OBJECTIVES.

It has not been possible, during the short time at our disposal, to prepare a detailed correlated programme of work for the whole period of seven years. However, we have tried to put down, under separate heads, the objectives of the new schools. In the future each Provincial Board of Education must include an expert curriculum maker, who will be responsible for preparing the detailed

correlated programme for the complete seven years' course of studies. As a result of their valuable observations in the new schools, the teachers, working under competent supervision and guidance, will be able to supply the details which will serve as a basis for this work. We are, however, attempting to make a correlated syllabus in broad outlines which will form an annexe to this report.

MAIN OUTLINES OF THE SEVEN YEARS' COURSE OF BASIC EDUCATION

1. The Basic Craft

Such reasonable skill should be attained in the handicraft chosen, as would enable the pupil to pursue it as an occupation after finishing his full course.

The following may be chosen as basic crafts in various schools :

- (a) Spinning and weaving.
- (b) Carpentry.
- (c) Agriculture.
- (d) Fruit and vegetable gardening.
- (e) Leather work.
- (f) Any other craft for which local and geographical conditions are favourable and which satisfies the conditions mentioned above.

Even where an industry other than spinning and weaving or agriculture is the basic craft, the pupils will be expected to attain a minimum knowledge of carding and spinning with the takli, and a practical

acquaintance of easy agricultural work in the local area.

II. Mother Tongue

The proper teaching of the mother tongue is the foundation of all education. Without the capacity to speak effectively and to read and write correctly lucidly, no-one can develop precision of thought or clarity of ideas. Moreover, it is a means of introducing the child to the rich heritage of his people's ideas, emotions and aspirations, and can therefore be made a valuable means of social education, whilst also instilling right ethical and moral values. Also it is a natural outlet for the expression of the child's aesthetic sense and appreciation, and if the proper approach is adopted, the study of literature becomes a source of joy and creative appreciation. More specifically, by the end of the seven years' course, the following objectives should be achieved :

1. The capacity to converse freely, naturally and confidently about the objects, people and happenings within the child's environment. This capacity should gradually develop into:

2. The capacity to speak lucidly, coherently and relevantly on any given topic of every-day interest.

3. The capacity to read silently, intelligently and with speed written passages of average difficulty. (This capacity should be developed at least to such an extent that the student may read newspapers and magazines of every-day interest.)

4. The capacity to read aloud—clearly, expres-

sively and with enjoyment—both prose and poetry. (The students should be able to discard the usual lifeless, monotonous and bored style of reading.)

5. The capacity to use the list of contents and the index and to consult dictionaries and reference books, and generally to utilise the library as a source of information and enjoyment.

6. The capacity to write legibly, correctly, and with reasonable speed.

7. The capacity to describe in writing, in a simple and clear style, every-day happenings and occurrences, e. g., to make reports of meetings held in the village for some co-operative purposes.

8. The capacity to write personal letters and business communications of a simple kind.

9. An acquaintance with, and interest in, the writings of standard authors, through, a study of their writings or extracts from them.

III. Mathematics

The objective is to develop in the pupil the capacity to solve speedily the ordinary number and geometrical problems arising in connection with his craft and with his home and community life. Pupils should also gain a knowledge of business practice and book-keeping.

We feel that these objectives can be attained by a knowledge of and adequate practice in:

The four simple rules; the four compound rules; fractions; decimals; the rule of three; the use of the unitary method; interest; elements of mensuration; practical geometry; the rudiments of book-keeping.

The teaching should not be confined merely to the facts and operations of number. It should be closely co-ordinated with life situations arising out of the basic handicraft and out of the great variety of actual problems in the life of the school and the community. Measurements of quantities and values in these connections would supply ample opportunity for the development of the reasoning capacities of the pupils.

IV. Social Studies

The objectives are :

1. To develop abroad human interest in the progress of mankind in general and of India in particular.

2. To develop in the pupil a proper understanding of his social and geographical environment; and to awaken the urge to improve it.

3. To inculcate the love of the motherland, reverence for its past, and a belief in its future destiny as the home of a united co-operative society based on love, truth and justice.

4. To develop a sense of the rights and responsibilities of citizenship.

5. To develop the individual and social virtues which make a man a reliable associate and trusted neighbour.

6. To develop mutual respect for the world religions.

A course in history, in geography, in civics and in current events, combined with a reverential study of the different religions of the world showing how

in essentials they meet in perfect harmony, will help to achieve these objectives. The study should begin with the child's own environment and its problems. His interest should be awakened in the manifold ways in which men supply their different wants. This should be made a starting point to arouse their curiosity about the life and work of men and women.

1. A simple outline of Indian history should be given. The chief landmarks in the development of the social and cultural life of the people should be stressed, and the gradual movement towards greater political and cultural unity be shown. Emphasis should be laid on the ideals of love, truth and justice, of co-operative endeavour, national solidarity, and the equality and brotherhood of man. The treatment of the subject should be chiefly biographical in the lower, and cultural and social in the upper, grades. Care should be taken to prevent pride in the past from degenerating into an arrogant and exclusive nationalism. Stories of the great liberators of mankind and their victories of peace should find a prominent place in the curriculum. Emphasis should be laid on lessons drawn from life showing the superiority of non-violence in all its phases and its concomitant virtues over violence, fraud and deceit. The history of the Indian national awakening combined with living appreciation of India's struggle for social, political and economic freedom, should prepare the pupils to bear their share of the burden joyfully and to stand the strain and stress of the period of transition.

Celebrations of national festivals and of the "National Week" should be a feature in the life of every school.

2. The pupils should become acquainted with the public utility services, the working of the panchayat and the co-operative society, the duties of the public servants, the constitution of the District Board or Municipality, the use and significance of the vote, and with the growth and significance of representative institutions. Training under this head should be as realistic as possible and should be brought into close relationship with actual life. Self-governing institutions should be introduced in the school. The pupils should be kept in intelligent touch with important current events through the co-operative study of some paper, preferably brought out by the school community.

3. The course in social studies should also include a study of world geography in outline, with a fuller knowledge of India and its relations with other lands. It should consist of:

- (a) Study of the plant, animal and human life in the home region and in other lands as controlled by geographical environment (stories, description, picture-study, practical observation and discussion, with constant reference to local facts and phenomena).
- (b) Study and representation of weather phenomena; (mainly outdoor work, e. g. direct observation of the sun; changes in the height of the noonday sun at different

times of the year; reading of the weather-vane; thermometer and barometer; methods of recording temperature and pressure; records of rainy and dry days and of the rainfall; prevailing wind directions; duration of day and night in different months; etc.)

- (c) Map-study and map-making; the world globe; study of local topography; making of and study of plans of the neighbourhood; recognition of conventional signs; use of the atlas and its index.
- (d) Study of the means of transport and communication correlated with industries and life.
- (e) Study of occupations; local agriculture and industry (visits to fields and factories); economic self-sufficiency and interdependence of different regions; types of agriculture and industry favoured by geographical environment; the principal industries of India.

V. General Science.

The objectives are :

1. To give pupils an intelligent and appreciative outlook on nature.
2. To form in the pupils habits of accurate observation and of testing experience by experiment.
3. To enable them to understand the important scientific principles exemplified in :

- (a) The natural phenomena around.
- (b) In the application of science to the service of man.

4. To introduce them to the more important incidents in the lives of the great scientists whose sacrifices in the cause of truth make a powerful appeal to the growing mind.

The curriculum should include the following topics from various sciences :

A. NATURE STUDY

- (a) A knowledge of plants, crops, animals and birds in the environment.
- (b) A knowledge of the changes of seasons and their effect on the activity of plants, animals, birds and man.
- (c) A knowledge of crops in different seasons.

B. BOTANY

- (a) Different parts of plants and their functions.
- (b) Processes of germination, growth and propagation.
- (c) Work on the school garden and the fields around to give the pupils an understanding of the effects of differing conditions of moisture, heat and light, and of the different qualities of seeds and manures.

C. ZOOLOGY

A study of germs, insects, reptiles and birds as friends and foes of man.

D. PHYSIOLOGY

The human body, its organs and functions.

E. HYGIENE

- (a) Personal hygiene; cleanliness of teeth, tongue, nails, eyes, hair, nose, skin, clothes.
- (b) Cleanliness of the home and the village; sanitation; disposal of night-soil.
- (c) Pure water; the village well.
- (d) Pure air; the function of trees in its purification; proper breathing.
- (e) Food, hygienic and unhygienic; balanced diets.
- (f) First aid and simple remedies.
- (g) Common infections; contagious diseases; how to safeguard against them.
- (h) Purity of conduct as a preservative of health.

F. PHYSICAL CULTURE

Games, athletics, drill (Deshi games to be encouraged).

G. CHEMISTRY

of air, water, acids, alkalis and salts.

H. A KNOWLEDGE OF THE STARS

showing direction; and time at night.

I. STORIES

of the great scientists and explorers and of their contributions to human well-being.

VI. Drawing

The objectives are :

1. To train the eye in the observation and discrimination of forms and colours.
2. To develop the memory for forms.
3. To cultivate a knowledge of and appreciation for the beautiful in nature and in art.
4. To draw out the capacity for tasteful design and decoration.
5. To develop the capacity to make working drawings of objects to be constructed.

These objectives can be obtained by :

- (a) Drawing made by children to illustrate material, read or observed.
- (b) Object and memory drawings, *e. g.*, drawings of plants and of animal and human forms (correlated with work in general science, handicraft, etc.)

3. Designing.

4. Scale drawing, graphs and pictorial graphs.

The work in drawing during the first four years should be correlated chiefly with work in reading and pictorial representation in nature study and the craft. During the last three years emphasis may be laid on design and decoration and mechanical drawing, so as to enable pupils to make correct working drawings.

VII. Music

The objective is to teach the pupils a number of beautiful songs and to cultivate in them a love for beautiful music. The child's natural sense of rhythm should be developed by teaching him to keep his own time by beating with the hand. Walking in time to a fixed rhythm can be a great aid in achieving this.

Care should be taken to select only the best and most inspiring songs, artistic interpretation of some healthy and elevating theme. Special emphasis should be placed on group or choral singing.

VIII. Hindustani

The object of including Hindustani as a compulsory subject in the school curriculum is to ensure that all the children educated in these national schools may have a reasonable acquaintance with a common "lingua franca." As adult citizens they should be able to co-operate with their fellow-countrymen belonging to any part of the country. In teaching the language the teacher should in various ways quicken in the students the realisation that this language is the most important product of the cultural contract of the Hindus and Muslims in India. It is the repository—in its more advanced forms—of their best thoughts and aspirations. They should learn to take pride in its richness and vitality and should feel the desire to serve it devotedly.

In Hindustani-speaking areas this language will be the mother-tongue, but the students as well as

the teachers will be required to learn both the scripts, so that they may read books written in Urdu as well as in Hindi. In non-Hindustani-speaking areas, where the provincial language will be the mother-tongue, the study of Hindustani will be compulsory during the 5th and 6th years of school life, but the children will have the choice of learning either one or the other script. However, in the case of teachers who have to deal with children of both kinds, knowledge of both the scripts is desirable.

At any rate, every public school must make adequate provision for the teaching of both scripts.

In general outlines, the syllabus of studies will be the same for boys and girls up to the 5th grade of the school. In grades 4 and 5 the syllabus in general science should be so modified as to include Domestic Science for girls. In grades 6 and 7 the girls will be allowed to take an advanced course in domestic science in place of the basic craft.

SECTION III. TRAINING OF TEACHERS

The proper training of teachers is perhaps the most important condition for the success of this scheme. Even in normal circumstances the quality of the teachers generally determines the quality of the education imparted. When a radical reconstruction of the entire educational system is contemplated, the importance of the teachers who work out these changes is greatly accentuated.

It is therefore essential that these teachers should have an understanding of the new educational and

social ideology inspiring the scheme combined with enthusiasm for working it out.

Since they are to teach not only certain academic subjects, but also crafts, their training should include a reasonably thorough mastery of the processes and technique of certain basic crafts

Their methods of teaching and approach to subject matter will be different. They will deal with the various subjects not as isolated and mutually exclusive branches of knowledge, but as inter-related aspects of a growing and developing activity which provides the focus of their correlation. For this purpose it is essential that teachers should have some training in formulating projects and schemes of correlated studies, and thus link up life, learning and activity.

They must have an intelligent interest in the life and activities of their human environment and a thorough grasp of the intimate relationship between schools and society.

Besides these points—which must be particularly stressed if the new scheme is to be worked in the spirit in which it is conceived—the teachers' training curriculum should of course include the other necessary skills and subjects.

In order to gain admission to the training institution, the candidate must have read up to the Matriculation Standard in some national or recognised Government institution, or must have had at least two years' teaching experience after passing the Vernacular Final or some equivalent examination.

Curriculum for a Complete Course of Teachers' Training (covering a period of three years).

1. (a) Growing, picking, carding of cotton (or wool), spinning of yarn and making of warp.
(b) Mechanics of the spinning wheel (or other instruments and tools involved in the exercise of the basic craft selected).
(c) Economics of village industries with special reference to the selected craft.
(d) Elementary carpentry involved in the selected craft.
2. Training in one of the following basic crafts:
 - (a) Spinning and weaving.
 - (b) Agriculture.
 - (c) Vegetable and fruit gardening.
 - (d) Carpentry.
 - (e) Toy-making.
 - (f) Leather work.
 - (g) Paper-making.

or any other craft which may be considered suitable for any particular locality.

3. Principles of education, which should comprise:
 - (a) The basic idea of education through productive work.
 - (b) The relation of the school to the community.
 - (c) Simple outline of child psychology (treated as concretely as possible) and of the psychology of acquiring a skill.
 - (d) Methods of teaching, with special reference to the formulation and development of projects.

- (e) Objectives of the new education, studied with reference to the actual conditions of life in the country.

4. An outline course in physiology, hygiene, sanitation and dietetic, referring specially to the actual problems of village life and aiming at direct, practical utility.

5. A revision and further development of the basic course in social studies directed towards securing the teacher's proper orientation to the manifold problems of his social environment. This should culminate in a broad general survey of India and the world during the last fifty years.

6. A course of lessons and directed study, in the mother tongue, to introduce the teachers to some master-pieces of Indian art and literature, thus imparting a general cultural background.

7. Knowledge of Hindustani, and the capacity to read and write both the Hindi and Urdu scripts, in both Hindustani and non-Hindustani-speaking areas. (This is essential for teachers in All State schools and aided schools, if they are to further some of the basic cultural and civic objectives of this education)

8. Black-board writing and drawing.

9. Physical culture drill and 'Deshi' games.

10. Supervised practice teaching in attached demonstration schools.

We expect these teacher training schools to be residential institutions where the students and their teachers will be in close contact with one another. They should develop co-operatively a vigorous and

many-sided social and cultural life in which the individual interests of the teachers in training will find adequate expression. We therefore visualise and invite the attention of the staff of these institutions to the desirability of encouraging the growth of many and varied hobbies and social activities carried on by the teachers under training in their leisure time.

The real success of these institutions will be judged by the variety and spontaneity of the various hobbies and social activities, the enthusiasm and persistence with which they are carried out, and their reaction on the life of schools and the community.

The course as outlined above might possibly give the impression of being too heavy and ambitious, and therefore unlikely to be practicable. We are anxious to counteract that impression by pointing out that, if approached in the right spirit, it is possible to cover this ground with reasonable thoroughness. It has to be remembered, in the first place, that this is a continuous three years' course, and therefore it lends itself to a fuller planning than is the case at present. Secondly, we expect that after a few years' time when the scheme is well under way, having passed through our new schools all the teachers recruited for training will have covered a good deal of the ground in craft training and in other subjects such as social studies. Therefore, this course will not so much teach new subjects as carry further and give a professional orientation to subject matter already studied.

Thirdly, we would again emphasise the fact that at this stage the object is not to make a thorough, systematic and scientific study, of these various subjects (which would be an unduly ambitious undertaking), but to centre the teaching round actual concrete problems of civics, sanitation, hygiene, first aid, child behaviour and class room practice arising in the school or in the environing community life. Of course, we hope that if professional pride has been quickened and intellectual interests have been generated, many of these teachers will continue their study privately and try to obtain a more thorough acquaintance with certain subjects. But so far as the training period of these teachers is concerned, our object is not to produce academically perfect scholars, but skilled, intelligent, educated craftsmen with the right mental orientation, who should be desirous of serving the community and anxious to help the coming generation to realise and understand the standard of values implicit in this educational scheme.

Curriculum for a Short Course of Teachers' Training

To make a beginning with this scheme as soon as possible, we recommend that a short emergency course of one year's training be provided for teachers specially selected from existing schools, national institutions and ashrams. The teachers selected should possess some background of successful teaching experience or craft work, and hold out promise of working the scheme in the right spirit,

with understanding and enthusiasm. The number of these teachers in any province may be determined by the number of schools which it is proposed to open at first.

The course of training for these teachers should include :

- (a) Training in carding and spinning with the takli. This will be compulsory, whatever may be the basic craft chosen.
- (b) Sufficient training in one of the above-mentioned basic crafts to enable the teacher to teach the first three years' school course in that craft.
- (c) A short course in physiology, hygiene, sanitation and dietetics.
- (d) The basic idea of the craft school and its relation to community life.
- (e) Formulation and working of simple projects as a basis of co-ordinated teaching.
- (f) A short course of lessons on the history of the Indian national awakening and the trend of world movements during this century.
- (g) Teaching of at least 25 lessons in the practice school under proper supervision.

SECTION IV. SUPERVISION AND EXAMINATIONS

A. Supervision

An efficient and sympathetic supervisory staff is almost as important for the new schools as well-trained teaching personnel. Supervision is a fairly

specialised work and we would recommend that provision should be made for the training of supervisors to meet the ever-growing needs of an expanding school system. The minimum qualification for a supervisor should in our opinion be complete training as a basic school teacher, together with at least two years' experience of successful teaching and a year of special training in the work of supervision and administration. Supervision should not be mere inspection, it should mean personal co-operation and help offered by one who knows more, to a less experienced or less resourceful colleague. Supervisors should, indeed, be able to play the role of leaders and guides in the educational experiment. In order that the more important obligations of helpful guidance and leadership may be properly fulfilled, it is necessary that the load of unavoidable administrative and routine work should be as light as possible. Therefore there should be an adequate number of supervisors, and the supervisory districts should not be unmanageably large. This will mean greater expense, but economy here will be bad economy.

B. Examinations

The system of examinations prevailing in our country has proved a curse to education. A bad system of education has, if possible, been made worse, by awarding to examinations a place out of all proportion to their utility. As a measure of the work of individual pupils or the schools, by a consensus of expert opinion examinations are neither

valid nor complete. They are inadequate and unreliable, capricious and arbitrary. We shall take care to guard the proposed system of general national education against their baneful influence.

The purpose of the examination can be served by an administrative check of the work of the schools in a prescribed area, by a sample measurement of the attainment of selected groups of students conducted by the Inspectors of the Education Board. The tests so administered should be constructed in close consultation with the specialists responsible for curriculum revision. They should be long enough to cover the whole range of the curriculum and should be in a form which makes marking objective and independent of individual judgment.

The introduction of this check-up by sample testing will add greatly to the efficiency of the school system and will in fact lengthen the teaching term of the final class by at least six weeks, the time now usually wasted on memorising "notes" and "revisions" which precede the ordeal of examinations. This period may now be devoted to a test of the efficiency of individual pupils in the basic craft over a period of weeks, to be determined from case to case, and to comparatively more intensive work for the improvement of the village community which the school serves.

The promotion from grade to grade should be decided exclusively by the teaching faculty of the school on the basis of careful records of the pupils' work. To maintain the desired level of efficiency

throughout the school system, the Board of Education should conduct an annual testing of typical sections from each grade of the schools of the various divisions. As far as possible, pupils should not be made to repeat the work of a grade or any considerable portion thereof. If a large number of children in a class "fails", the work of the teacher needs watching. If a school records many failures its administration must be looked into, and if the number of failures in the whole school system is large, there is something wrong with the curriculum and the norms set for the several grades. This should be set right. There is hardly any justification for making pupils repeat the work of a grade.

The Board of Education should judge the efficiency of its schools by the sample achievement tests mentioned above by the efficiency of the pupils in the basic handicraft, and by the specific contributions made by the teachers and pupils to the improvement of the general life of the community around. An annual district exhibition of the work of the schools will also go a long way towards keeping up a definite standard of achievement.

SECTION V. ADMINISTRATION

1. The objectives of education which we have enunciated above (Sec. II) will require that the pupils should remain at school for seven years. After careful consideration we have come to the conclusion that seven plus will be the proper age to enforce compulsion. Since we accept as a principle that the basic education should as far as possible be

the same for all, we recommend that it should be free and compulsory for all girls and boys between the ages of seven and fourteen. As a concession, however, girls may be withdrawn after the completion of their twelfth year if the guardians so wish it.

2. We realise that by fixing seven plus as the age for the introduction of compulsory education, we have left out a very important period of the child's life to be shaped in the rather unfavourable surroundings of poor village homes under the care of uneducated and indifferent parents mostly struggling against unbearable circumstances. We feel very strongly the necessity for some organisation of pre-school education conducted or supported by the State, for children between the ages of three and seven. A painful consciousness of the realities of the situation, chiefly financial, prevents us from making this recommendation. We are anxious, however, that the State should not overlook its ultimate responsibility in the matter. We are confident that if the scheme of basic education suggested here, with its intimate relation to home life, is firmly established, it will go a long way towards helping the pre-school child to get a better home training than he now does. It will also help considerably in the great work of adult education which will also have to be taken up in right earnest at no distant date.

3. We have tried to make an estimate of the time required to complete the different section of the curriculum. We feel that the following distribution will be about right :

The basic craft	3 hours 20 minutes.
Music, drawing and arithmetic	40 minutes.
The mother tongue	40 minutes.
Social studies and general science	30 minutes.
Physical training	10 minutes.
Recess	10 minutes.

5 hours and 30 minutes.

In making this estimate, we have kept spinning and weaving as the basic craft. The distribution might vary from craft to craft, but in no case should the time allotted to the basic craft exceed the above estimate.

The school is expected to work for 288 days in a year, average of 24 days in a month.

4. In view of the diversity of pupils' interests we recommend that as far as possible a variety of crafts should be provided for, at least during the last two years of the school course.

5. We are of opinion that every school should have attached to it a plot of land big enough for a school garden and a playground.

6. Research has established a very close relationship between malnutrition and backwardness at school. Considering the almost universal undernourishment of the village children, we recommend that every effort should be made to remedy the defect by providing light nourishment to all children during school hours. We are confident that the State will be able to secure enough co-operation from the public to meet the expenses involved in the undertaking.

7. With regard to the teachers' salaries, we endorse Gandhiji's suggestion that "it should, if possible, be Rs. 25 and never less than Rs. 20." But we also contemplate that for teaching the higher classes of the school, it may be necessary to employ some teachers with higher academic qualifications, and for them a somewhat higher pay may have to be provided.

8. We recommend that during the first two or three years of the experiment, especially qualified and competent teachers should be secured—even if their pay is somewhat higher—so that in selected schools they may work out the necessary details and technique of the syllabus and the new methods of teaching. When this pioneering stage has been successfully crossed, it will be possible for average teachers who have received training in our three-year institutions to carry on the work fairly satisfactorily.

9. We are of opinion that the average number of students in any class should not exceed thirty. If the number is larger, it will not be possible for the teacher to discharge his heavy and responsible duties efficiently.

10. In the selection of teachers, preference should be given to those who belong to the locality in which the school is situated.

11. In order to encourage women to take to this profession, special efforts should be made to provide facilities for training them as teachers.

12. The problem of selecting suitable candidates for training should be carefully and compe-

tently examined, and a reliable technique of selection evolved. We are convinced that unless this difficult problem is tackled, the scheme will have little chance of success. Teaching requires special social and moral aptitudes and qualities, and it is not right to assume that everyone who volunteers to enter the profession is suitable for it. We must, therefore, conduct our selection with great care and forethought and preferably take only those who belong to what the psychologists call "the social type."

13. We suggest that these training institutions, should be residential institutions open to all classes and creeds, and free from restrictions relating to untouchability and interdining.

14. In these institutions expert artisans or craftsmen may be employed to give craft training. Local artisans may also be utilised, if necessary, to help the teachers of basic schools in their craft teaching and in putting the finishing touches for marketing purposes to the material produced by the students.

15. Refresher courses on a large scale should be gradually organised at training colleges and schools, in order to maintain and improve the efficiency of teachers. Such courses should be of various types—cultural, professional and industrial.

16. Demonstration schools should be attached to every training institution and these should serve as laboratories where new methods of teaching are attempted and developed. These schools—staffed by specially qualified teachers—should serve as methods for their locality, and teachers from other

schools should be given an opportunity to see the working, teaching materials, and technique.

17. The introduction of a craft, the co-ordination and correlation of the content of the curriculum, the close relationship with life, the method of learning by doing, the individual initiative, and the sense of social responsibility, which are among the main features of the new scheme suggested here, cannot be realised without supplying to both the teachers and the pupils—but primarily to the teachers—such books and material as would help to achieve our aim. It is essential that the illustrative material, the books for the teachers, and the necessary programmes of correlated work should be prepared. Entirely new text-books, permeated with the new spirit, are also essential. The Board of Education in each province and the Central Institute of National Education, whose establishment is recommended below, will be able to render valuable help in this connection. The provinces which propose to establish the new type of schools must institute the requisite machinery for the preparation of these necessary books and materials at the earliest possible date.

18. In the section on examination we have referred to the systematic measurement of school achievements as an important function of the education authority in each province. We recommend that the Board of Education in each province should provide on its academic side for an efficient staff of educational experts. This staff should carry on scientific research to fit the school curriculum to the

real life of the people, and to guide the teachers in the use of the new standards and norms of achievement. They should try progressive method of teaching, keep the teachers in touch with the results of successful experiments undertaken in this country and elsewhere, and also guide the training of teachers and supervisors.

19. A part from the official boards, we would recommend the formation of an independent, non-official Central Institute of Indian Education, which should be free from administrative responsibility and consist of persons eminent in the field of education as well as in other spheres of cultural activity. The objects of this institute should be as follows :

(1) To serve as an advisory body on matters of educational policy and practice.

(2) To study and discuss the ideas and aims underlying educational efforts in India and outside, and to make the results of this study available to all who are interested.

(3) To collect information about, and to keep in touch with, the educational work of the various Indian Provinces and States, as well as foreign countries.

(4) To organise research on problems relating to education.

(5) To issue monographs and a magazine for educational workers.

20. It is common knowledge that the different public utility services of the country which should be concerned with the welfare of its future citizens are sadly un-co-ordinated. We recommend that the

Department of Education should be placed in a position to secure the co-operation of the other State departments (*e. g.*, Health, Agriculture, Public Works, Co-operation, Local Self-government) in building up a healthy, happy and efficient school community.

A detailed scheme of spinning and weaving as the basic craft.

APPENDIX

A SEVEN YEARS' COURSE OF SPINNING AND WEAVING AS THE BASIC CRAFT

Main Outline of the Course

1. The course has been divided into two parts :
 - (a) A course of spinning,
 - (b) A course of weaving.
2. The first five years of the course of the basic education should be devoted to spinning, and the last two years to weaving with an elementary knowledge of carpentry and blacksmithy.
3. Each year has been divided into two terms as this will be a better record of the child's progress.
4. The process of ginning and cleaning cotton should be introduced into schools only to serve as practice lessons. All the cotton used in the schools should be cotton ginned on the hand-ginning charkha, except the quantity of cotton necessary for the practice work in the above two processes. For this purpose it will be necessary to have clean cotton

picked from the fields, *i. e.*, cotton free from leaves and insects.

5. Senior students should prepare slivers for the juniors who cannot card for themselves.

6. It should be a matter of special attention on the part of the teacher that there should be no wastage of yarn (from breaking, etc.) from the very earliest stage in the processes of spinning, whether on the takli or on the charkha. 10% wastage is, however, usually allowed (including 5% in carding), prices of yarn being calculated so as to cover this. In any case, therefore, our wastage must not exceed this limit.

7. When the count of the yarn produced is 8 to 12 or less, the cotton used should not be of a lower quality than 'roziun'. When the yarn produced is of 13 counts or upwards, only cotton of a longer fibre such as Veram, Surati, Cambodia, Jayvant, Punjab-American should be used.

8. The time given to industrial training should be three hours and twenty minutes per day, and the total number of working days in the year, 288 (on the basis of 24 days per month).

9. The speed which is expected at the end of the half-yearly term, and which will be used as a test, is applicable only for the specified time of the test. The daily speed given represents the average daily speed for 3 hours 20 minutes' work.

10. 25% deduction has been made from the total estimated output for absences due to illness and other causes.

FIRST YEAR : FIRST TERM**Spinning**

1. The following processes should be taught during the term :

- (a) Cleaning cotton.
- (b) Preparing slivers from carded cotton.
- (c) Piecing.
- (d) Spinning on the takli with the right hand;
With the fingers;
On the leg above the knee;
On the leg below the knee.
- (e) Spinning on the takli with the left hand,
but the twist to be as the right hand twist.

The three methods as above.

- (f) Winding yarn on to the winder.

2. Spinning on the takli should be taught alternately with right and left hands.

3. The speed at the end of six months, including winding, should be $1\frac{1}{2}$ lattis (hanks of 160 rounds) of 10 counts yarn in three hours.

4. The average daily speed for the six months should be $\frac{3}{4}$ latti of 10 counts yarn—i. e., the total production of 144 days is 27 goondis (hanks of 640 rounds), weighing one seer $1\frac{1}{2}$ pows. Wages at the rate of 0-12-0 per seer, excluding carding, will be Re. 1-6-0.

FIRST YEAR : SECOND TERM

1. In this term carding should be taught
2. At the end of six months the speed of card-

ing (including the making of slivers) should reach $2\frac{1}{2}$ tolas an hour.

3. At the end of six months the speed of spinning on the takli, including winding, should be 2 lattis of 10 counts yarn in three hours.

4. The average speed of spinning on the takli for this term, including carding, should be $1\frac{1}{4}$ lattis of 10 counts yarn in three hours. The total production will be 45 goondis weighing $2\frac{1}{4}$ seers. Wages (@ Rs. 1-6-0 per seer (including carding) will be Rs. 2-8-5.

SECOND YEAR: FIRST TERM

Spinning

1. Ginning should be taught in this term.

2. At first, ginning should be taught with a wooden plank and a steel rod. When the speed has reached 1 chatak in $\frac{1}{2}$ hour the village ginning charkhas should be introduced.

3. The speed of ginning at the end of six months should reach 20 tolas of cotton in $\frac{1}{2}$ hour.

4. The speed of carding (including the preparation of slivers) at the end of the term, should reach 3 tolas per hour.

5. The speed of spinning on the takli (including winding) at the end of the term should reach $2\frac{1}{4}$ lattis of 10 counts yarn in 3 hours.

6. The daily average rate of spinning on the takli (including carding) for the term, should reach $1\frac{3}{4}$ lattis of 12 counts yarn in three hours. The total production will be 63 goondis weighing 2 seers

10 chataks Wages @ Rs. 1-6-0 per seer (including carding) will be Rs. 3-9-9. Adding 0-4-0 for ginning, the total wages will be Rs. 3-13-9.

SECOND YEAR: SECOND TERM

1. In this term, students should be taught spinning on the Yeravda Charkha, with double-handed spindle-holders (Modies).

2. Spinning on this charkha should be taught with the right and left hands alternately.

3. The speed of carding (including the making of slivers) at the end of the term, should reach $3\frac{1}{2}$ tolas per hour.

4. The speed of spinning on the takli (including winding) at the end of the term, should reach $2\frac{1}{2}$ lattis of 12 counts yarn in three hours.

5. The speed of spinning on the charkha (including winding) at the end of this term, should reach $3\frac{3}{4}$ lattis of 16 counts yarn in three hours.

6. During this term the processes of calculating the count of the yarn produced should be taught. The child should be able to do the work both practically and with intelligent understanding.

7. The daily average speed of spinning (including carding), for the term, on the charkha should be $2\frac{1}{2}$ lattis of 14 counts yarn. The total production will be 90 goondis weighing 3 seers $3\frac{1}{2}$ chataks. At the rate of Rs. 1-6-0 per seer (including carding) the wages will be Rs. 5-3-6. Adding 0-4-0 for ginning, the total income becomes Rs. 5-7-6.

THIRD YEAR: FIRST TERM

Spinning

1. In this term the students should be taught to recognise the different types of cotton. They should also learn to estimate the length of fibre and to understand the count of yarn which can be produced from each different type of cotton.

2. At the end of the term, the rate of carding (including the preparation of slivers) should reach 4 tolas an hour.

3. At the end of the term, the speed of spinning on the takli (including winding) should reach $2\frac{1}{2}$ latts of 12 counts yarn in three hours.

4. At the end of this term; the speed of spinning on the charkha (including winding) should reach $3\frac{3}{4}$ latts of 20 counts yarn in three hours.

5. The daily average speed of spinning (including carding) of the term will be $2\frac{1}{2}$ latts of 20 counts yarn in three hours. The total production will be 90 goondis weighing $2\frac{1}{4}$ seers. Wages at the rate of Rs. 2-4-0 per seer (including carding) will be Rs. 5-1-0

THIRD YEAR: SECOND TERM

1. At the end of the term the speed of spinning on the takli (including winding) should reach $2\frac{3}{4}$ latts of 12 counts yarn in three hours.

2. At the end of the term the speed of spinning on the charkhas (including winding) should reach $4\frac{1}{2}$ latts of 20 counts yarn in three hours.

3. The daily average speed of spinning for the term (including carding) will be $3\frac{1}{2}$ lattis of 20 counts yarn in 3 hours. The total production will be 117 goondis weighing 2 seers $14\frac{1}{2}$ chataks. Wages @ Rs. 2-4-0 per seer (including carding) will be Rs. 6-8-9.

FOURTH YEAR : FIRST TERM

Spinning

1. During this term the students should be taught the following subjects with the correlated theoretical knowledge.

- (a) How to find the strength and evenness of the yarn;
- (b) How to calculate the resultant speed by the formula S/C where S is speed and C is count.

2. In this term the student should learn to repair the ginning charkha and the carding bow.

3. At the end of six months the speed of spinning on the charkha (including winding) should reach $4\frac{1}{2}$ lattis of 24 counts yarn in three hours.

4. The daily average speed of spinning (including carding) for this term should reach $3\frac{1}{2}$ lattis of 24 counts yarn. The total production will be 126 goondis weighing 2 seers 10 chataks. Wages @ Rs. 2-14-0 per seer (including carding) will be reached 1 chatak in $\frac{1}{2}$ hour the village ginning charge Rs. 7-8-9.

FOURTH YEAR : SECOND TERM

1. In this term the students should be taught the following subjects :

(a) A knowledge of the different parts of the Yeravda Charkha and how to repair it.

(b) The preparation of bamboo taklis.

2. At the end of the term, the speed of spinning on the takli (including winding) should reach 3 lattis of 14 counts yarn in three hours.

3. At the end of the term, the speed of spinning on the charkha (including winding) should reach 5 lattis of 28 counts yarn in three hours.

4. The daily average speed of spinning (including carding) for the term should be $3\frac{1}{2}$ lattis of 28 counts yarn in 3 hours. The total production will be 126 goondis weighing $2\frac{1}{4}$ seers. Wages @ Rs. 3-10-0 per seer will be Rs. 8-2-6.

FIFTH YEAR : FIRST TERM

Spinning

1. In this term the students should be taught ginning and carding on the Andhra method, and spinning yarn to 40 counts; but the spinning should continue to be on the Yeravda Charkha.

2. At the end of the term the speed of spinning (including winding) should reach 2 lattis of 40 counts yarn in 2 hours.

3. In this term the students should also be taught to spin on the Magan Charkha.

4. The speed of spinning on the Magan Charkha

(including winding) at the end of the term should reach $2\frac{1}{2}$ lattis of 24 counts yarn in an hour.

5. The daily average speed of spinning (including ginning and carding) for the term on the Yeravda Charkha should reach $1\frac{1}{4}$ lattis of 40 counts yarn in 3 hours, and on the Magan Charkha (including carding) $1\frac{1}{2}$ lattis of 24 counts yarn.

6. The total production for six months will be 45 goondis of 40 count yarn weighing $\frac{1}{2}$ seer 1 chatak and 54 goondis of 24 counts yarn weighing 1 seer 2 chataks.

7. The wages for 40 counts yarn @ Rs 6-4-0 per seer will be Rs. 3-8-3, and for 24 counts yarn @ Rs. 2-14-0 per seer (including carding) will be Rs. 3-3-9. The total earnings for this term will be Rs. 6-12-0.

FIFTH YEAR : SECOND TERM

1. In this term the student should be taught to spin yarn to 60 counts.

2. The following subjects should be taught with the correlated theoretical knowledge :

(a) The length of yarn necessary to produce one yard of cloth.

(b) The necessary twist required in one inch of yarn for particular count.

(c) The ratio of the revolution of the spindle to the revolution of the wheel.

3. In this term the students should also be taught how to straighten the spindle.

4. During this term the students should also

gain a comparative knowledge of the different types of charkha, such as the Yeravda Charkha, the Magan Charkha and the Savli Charkha.

5. At the end of the term the speed of spinning on the takli (including winding) should reach 3 lattis of 16 counts yarn in three hours.

6 At the end of the term the speed of spinning (including ginning and carding) 60 counts yarn should reach 2 lattis in 2 hours, and the speed of spinning (including carding) 28 counts yarn should reach 3 lattis in one hour.

7. The daily average speed of spinning during this term will be $1\frac{1}{4}$ lattis of 60 counts yarn and 2 lattis of 28 counts yarn. The total production will be 45 goondis of 60 counts yarn weighing 6 chataks and 72 goondis of 28 counts yarn weighing 1 seer $4\frac{1}{2}$ chataks.

8. The wages for 60 counts yarn @ Rs. 11-4-0 per seer will be Rs. 4-3-6, and the wages for 28 counts yarn @ Rs. 3-10-0 per seer will be Rs. 4-10-3. The total earnings will be Rs. 8-13-9.

Income per student for five years

First Year	Rs.	3	9	0
Second Year	„	9	5	3
Third Year	„	11	9	9
Fourth Year	„	15	11	3
Fifth Year	„	15	9	9

Total income for five years Rs. 55 13 0

Reckoning a deduction of 25 per cent. the total income for five years stands at Rs. 41-13-9.

WEAVING SECTION

1. The craft of weaving is so wide in scope that it is not possible to give the students a complete training in this craft in two years. Two alternative courses have been suggested. A school may provide for both the courses allowing the student to choose one. In either case, however, the course of two years will serve only as an introduction, and a student who wishes to have a complete knowledge of this handicraft should continue his training after this period.

2. At this stage the student will be only 13-14 years old. The course described is therefore of an elementary nature.

3. At the end of five years the student should have a fairly high knowledge of spinning. It has, therefore, not been included in the school time-table, but the students should continue to spin at home, and the school should make the necessary arrangements for the students to get the proper value of yarn produced at home—either in money or in cloth.

FIRST YEAR

1. The course of weaving has not been divided into half-yearly terms, but into two terms of a year each, in consideration of the special nature of the craft of weaving.

2. The following processes should be taught to
- (a) Winding
 - (b) Reeling

- (c) Joining ends
- (d) Warping (on the warping frame)
- (e) (i) Spreading and distributing
- (ii) Sizing
- (f) Double-warp weaving (on the handloom.)

3. At the end of the year the speed in the above processes should be as follows:

- | | |
|-----------------------------------|---|
| (a) Winding | 5 goondis in an hour. |
| (b) Reeling | 3 goondis in an hour. |
| (c) Joining ends | { 2½ punjams (60 holes of a reed) in an hour. |
| (d) Warping | 2½—do— |
| (e) (i) Spreading & Distributing. | { Both the processes in 3 hours. |
| (ii) Sizing. | |
| (f) Weaving (with filled bobbins) | 2 yards in 3 hours. |

4. In a year the total length of cloth woven by each student with all the processes should be 108 yards.

5. Wages at the rate of 0-12-6 per piece of 10 yards will be Rs. 8-7-0.

SECOND YEAR

1. In this year, too, the student should continue the training of double warp weaving—but he should also be taught pattern-weaving such as honey-comb towels, coloured coatings, etc.

2. During this year, the student should learn to calculate, with the correlated theoretical knowledge,

the particular count of yarn necessary for a particular type of punjam.

3. The speed of weaving at the end of the year (on the fly-shuttle loom with filled bobbins) should be $3\frac{1}{2}$ yards in three hours.

4. The total amount of cloth woven in the year by each student should be 216 yards. Wages at the rate of Rs. 0-1-3 per yard will be Rs. 16-14-0.

The income per student for two years

First Year	Rs.	8	7	0
Second Year	„	16	14	0
<hr/>				
Total Rs.		25	5	0

Deducting 25 per cent. the income for two years amounts to Rs. 18-15-9.

TAPE AND DUREE WEAVING

First Year

1. In this department the students should be taught the following subjects:

Twisting the yarn.

Rope-making.

Preparing the warp.

Preparing the heddle.

Weaving tapes, durees, asans, and carpets of different designs.

2 In the first year the students should be taught to weave white and coloured tapes, lace, white and coloured asans, and white durees.

3. Different rates of wages are paid for the weaving of tapes, asans and durees, and the wages are higher than the wages for the weaving of ordinary cloth. However, for the purpose of calculation, the wages for weaving for this year have been reckoned as Rs. 8-7-0.

Second Year

1. During this year the students should be taught how to weave coloured durees and carpets. The whole year will be devoted to this work as the durees and carpets will be of different designs.

2. The wages per student for the year have been reckoned as the same as the wages for ordinary weaving, i.e. Rs. 16-14-0

Total Income for Seven Years

	Rs.	a.	p.
Spinning	...	41	13 9
Weaving	...	18	15 9
			<hr/>
Total	...	60	13 6

The teacher's salary has been calculated at the rate of Rs. 25 per month.

Total salary of the teacher for	
seven years	Rs. 2,100
Reckoning 30 students per teacher, the	
total income for seven years is	Rs. 1,825

GENERAL SUGGESTIONS

Although this scheme has been prepared in fair detail, it cannot be considered the final scheme, and many improvements can be made on it. The following important points, however, might be noted :

1. This scheme solves, to a great extent, the problem of the teacher's salary, which has been reckoned at an average figure of Rs. 25 per mensem.

2. A total deduction of 25% on the full number of working days has been estimated.

3. Since we have to use the craft as a means of education, and not only to teach it as an industry, the speed of work has been reckoned as slower than the speed ordinarily attained.

4. The wages have been reckoned on the basis of the wages paid by the Maharashtra Branch of the All India Spinners' Association.

5. It may be assumed that the actual income will exceed the figures given here, and can on no account be less. If it falls below the estimate, it may be taken as a sure indication of inefficiency either in the staff or the implements.

6. The articles of equipment noted down in the lists given should be used as centres of interest for the general education of the student.

7. The test to see whether a student has attained the standard required at the completion of the course, will be the rate of earning—working an 8-hour day for two months, i.e. 48 working days. If he can earn Rs. 12 (at the rate of 4 as. per day)

he should be considered to have passed the test.

8. This scheme provides that on completion of the course every student will become a self-supporting unit.

9. During the first year, spinning on the takli can and should be taught on the mass drill method.

10. Music should be taught with spinning on the takli or the charkha. This will add to both the pleasure and the speed of spinning.

11. It is expected that the second period of seven years will bring more successful results than the first period of seven years.

12. It will be possible for boys to remain at school for a longer period only if they are able to render some financial contribution to the home. The school, therefore, should make arrangements for them to undertake spinning at home, and should see that the boys receive the proper wages in return.

List of Accessories : Spinning department

Spinning

Takli	... Rs.	0	1	9
Winder	... „	0	1	0
Takli-case	... „	0	2	0-
Yeravda Charkha	... „	2	8	0
Charkha Winder	... „	0	2	0
Oil-can	... „	0	1	0
Miscellaneous	... „	0	1	3
Total		...	3	1 0

Ginning

Wooden Plank 4" × 6" × 1"	Rs.	0	1	0
Rod	...	0	4	0
Village Gin	...	1	10	0
Jaw-bone of a fish	...	0	4	0
Total	...	2	3	0

Carding

Medium Bow	...	Rs.	0	8	0
Striker	...	0	2	0	
Wooden plank for making slivers	...	0	4	3	
Handle	...	0	3	0	
Rod for making slivers	...	0	1	0	
Gut etc.	...	0	7	0	
Mat	...	0	2	0	
Andhra bow	...	0	5	0	
Total	...	2	0	0	

Tools etc.

Hammer	...	Rs.	0	7	0
Anvil	...	0	8	0	
File	...	0	8	0	
Chisel	...	0	9	0	
Small saw	...	0	8	0	
Plane	...	1	0	0	
Drill-Machine	...	2	12	0	
Knife	...	0	4	0	
Scissors	...	0	6	0	
Screw-driver	...	0	6	0	

Balance (small)				
1/16 Tola to 2 Tolas	...	„	2	0 0
Balance (large)				
1/2 ch. to 1 seer	...	„	3	0 0
Total	...	„	12	12 0

Grand Total Rs. 20 0 0

Note: We have given a rough estimate of tools and accessories. Therefore the prices may vary slightly.

**List of Accessories for the Weaving of cloth,
durees and tapes**

Tape Weaving

Twisting wheel	...	Rs.	1	8 0
Heddles frame	...	„	0	8 0
Beater or striker	...	„	0	1 0
Total	...	„	2	1 0

Weaving of asans and durees

Heddles frame	...	„	0	12 0'
Fork	...	„	0	8 0
Seat or rest, supports, props, etc.	...	„	0	12 0
Total	...	„	2	0 0

Warping

Distaff or chakri	... Rs.	0	4	0
Winder	... „	0	1	0
Spool	... „	0	0	6
Tin bobbins	... „	0	12	0
Warping wheel	... „	1	8	0
Warping frame	... „	2	0	0
Buckets	... „	0	7	0
Ropes etc.	... „	0	7	6
		<hr/>		
Total	... „	5	8	0

Sizing

Poles of teak-wood	...	Rs.	3	4	0
Poles of bamboo	...	„	0	8	0
Two brushes	...	„	5	0	0
			<hr/>		
Total	...	„	8	12	0

Weaving

Reeds	...	Rs.	3	0	0
Hand-loom	...	"	1	8	0
Fly-shuttle loom	...	"	7	0	0
Roller	...	"	1	8	0
Hand-loom shuttle	...	"	0	4	0
Fly-shuttle	...	"	0	8	0
Beam	...	"	2	8	0
Level bottle	...	"	0	12	0
Yard-stick	...	"	0	3	0
Poles etc.	...	"	1	0	0
Thick ropes etc.	...	"	1	8	0
Total	...	"	19	11	0

Making Heddles Frame

Reel	...	Rs.	1	0	0
Cylinder & wooden pins	...	„	0	4	0
Miscellaneous	...	„	0	12	0
<hr/>					
Total	...	„	2	0	0
<hr/>					
Grand Total	...	Rs.	40	0	0
<hr/>					

This is only a rough estimate of the prices of accessories and may differ according to local conditions.

List of Accessories for Spinning, Carding and Weaving for a full school of seven grades of 30 students each

	Rate	Cost
1. 125 Folding Charkhas	Rs. 2/8/- ea.	Rs. 312-8-0
2. 25 Carding Sets, including all accessories, but excluding Andhra bow	... Rs. 1/11/- ea.	Rs. 42-3-0
3. 50 Taklies and 50 winders	... Re. -/2/9 per pr.	Rs. 8- 9-6
4. 5 Hand Gins	... Rs. 1/10/- ea.	Rs. 8- 2-0
5. 15 Wooden Boards and brass pins	... Rs. -/5/- per pr.	Rs. 4-11-0
6. 5 Magan Charkhas	... Rs. 6/- each	Rs. 30- 0-0
7. 5 Savli Charkhas	... Re. 1/4/- each	Rs. 6- 4-0
8. Carpentry Tools		

9. 20 Looms with all accessories	... Rs. 25/-/- each	Rs. 500- 0-0
10. Miscellaneous		Rs. 62-10-6

Total Rs. 1000- 0-0

Note:—The above prices are approximate, and are subject to market fluctuations and to prices varying from district to district.

Working Capital

Stock of Cotton	... ..	Rs. 300-0-0
Stock of Spinning Wheels and other Accessories	... ..	Rs. 100-0-0
Stock of slivers, weaving materials, etc.	... ..	Rs. 100-0-0

Total ... Rs. 500-0-0

PART IV

SYLLABUS OF BASIC EDUCATION

CHAPTER XI

SYLLABUS UNDER WARDHA EDUCATION COMMITTEE REPORT

The text of the syllabus is reproduced below :—
Mahatmaji,

In presenting the graded syllabus of Basic Education which you wanted us to prepare, we should like to clear up certain points which have caused, or may occasion, misunderstanding to those who have not clearly grasped the ideas and principles underlying this syllabus

In the first place, it is necessary to appreciate the limitations under which we have worked. A syllabus of this kind, which aims at far-reaching reconstruction of educational practice, really requires a background of fairly extensive, experimental work on the lines indicated in our Report, because it is only after such practical experience that all the possible correlations can be confidently worked out. While we have done our best in preparing this syllabus and fully utilized our collective experience as teachers as well as the suggestions received from friends, we must point out that this should be regarded as a tentative scheme which we have drawn up to show that the principle of co ordinated teaching which we have advocated in our Report can be

worked out in practice and translated into the terms of the curriculum. But we hope that as teachers in our training schools and colleges and in the new schools of basic education begin to work out the scheme scientifically and record their observations and experiences, it will be possible to improve the syllabus progressively. Such an experimental attitude of mind on the part of the teachers is essential for the success and efficiency of this educational scheme.

We have given the detailed grade placements of the subjects for the seven classes of the basic school in order to show that, with spinning and weaving as the basic craft (selected for illustration), it is possible to include the essential subject matter in language, mathematics, social studies, general science, and drawing, within the time available for the purpose, and co-ordinate it with the craft work to a considerable extent. This will show that, on the one hand, the subject matter selected is not excessive (as some critics of the scheme have made out) and, on the other hand, no really significant units of a cultural curriculum have been omitted.

We have also given the detailed grade placements of two other basic crafts suggested in our Report—Agriculture and Woodwork. These syllabuses were prepared for us by experts outside our Committee, as none of us had the necessary knowledge for doing so. Leaving aside the details of these syllabuses, we are confident that the contents of the general curriculum could also be correlated, or conveyed through either of these two basic crafts.

In order to work out an effective and natural co-ordination of the various subjects and to make the syllabus a means of adjusting the child intelligently and actively to his environment, we have chosen three centres, intrinsically inter-connected, as the focii for the curriculum, *i. e.* the Physical Environment, the Social Environment, and Craft Work which is their natural meeting point since it utilizes the resources of the former for the purposes of the latter. With a view to demonstrate how the subject matter selected is co-ordinated with these three centres we have also given, besides the grade placements, a separate indication of how the various items of the curriculum can be correlated with the basic craft of spinning and weaving. This will also, incidentally, answer the criticism that the scheme is not child-centred—a criticism which is based on ignorance of one of the most strongly stressed points in our Report. We have also given as an appendix, a chart prepared by one of our colleagues, showing graphically how the entire syllabus is definitely child-centred. We fail to understand how this scheme, base on activity, and the study of the child's physical and social environment, can be less child-centric than the present education which is entirely book-centred !

It is essential for all teachers and educational workers to note that we have really attempted to draft an "activity curriculum" which implies that our schools must be places of work and experimentation and discovery, not of passive absorption of information imparted at second-hand. So far as

the curriculum is concerned, we have stressed this principal by advocating that all teaching should be carried on through concrete life situations relating to craft or to social and physical environment so that whatever the child learns becomes assimilated into his growing activity.

It should be noted in this connection that in the preparation of this syllabus, we have attempted to organise the subject-matter into significant and comprehensive units of experience which will, when mastered, enable the child to understand his environment better and to react to it more intelligently because they throw helpful light on the problems and conditions of life around him. We are conscious of the fact that there is much scope for improvement in the actual units selected, but we are confident that this is the right approach to the syllabus, rather than the current practice of making it a collection of unrelated and miscellaneous facts having no direct bearing on children's experiences or on social life. The syllabus in Social Studies and General Science will illustrate this principle.

When for instance, work in social Studies or General Science is related to Drawing, and the knowledge of History and Geography enriches the child's understanding and appreciation of his craft, when Gardening and Agriculture are an integral part of his education, the school should become an active centre of experience and of abundant life.

But the working of this curriculum is in itself a problem of great importance, and demands intelligent alertness and responsiveness on the part of the

teachers, for even the best of curricula can be made mere dead letter, if the method of teaching and discipline adopted are not inspired by the spirit of activity. In order to indicate, therefore, how the full possibilities of this curriculum can be exploited, it seems necessary to point out by way of illustration, the method to be adopted in the approach to some of the subjects included in the curriculum. For if subjects such as Social Studies and General Science are presented by the teachers as catalogues of facts to be passively accepted and learnt up by the children, the whole object of the syllabus will be defeated, and they will entirely fail to appreciate the real nature of the correlation amongst the various subjects. This can only be realised when they are acquired through real learning situations involving self-activity on the children's part.

In the syllabus of Mother Tongue, for example, we have attempted to stress both the creative and utilitarian values of language and literature. The teacher must organise his oral work as well as his reading material round the actual but growing life and interests of his children so that they may gradually

- a. develop a consciousness of the wonders of the life of nature around them,
- b. observe and describe the different processes of the school crafts and the life of their home, village and school,
- c. write simple business and personal letters as a normal activity of social life,

- d. keep a daily record of progress in the basic handicrafts,
- e. help in the editing of a school magazine and the preparation of a daily news bulletin,
- f. make a clear and connected speech of a reasonable duration on some topic of general interest,
- g. appreciate beautiful literature.

This suggests not only a principle for the selection of topics in the literary readers, but also stresses the close connection of the mother tongue with craft work, social studies and village life and activities. The method of teaching must, therefore, be such as will give the child a mastery of his mother tongue as a tool not only for learning but for use in actual life situations.

Similarly, the syllabus in Social Studies is an attempt to adjust the child to his social environment, both in space—which is the function of Geography—and in time—which is the function of History. Civics which aims partly at the giving of intellectual understanding of the present day problems and partly at developing the right social and intellectual attitudes has also been included as an integral part of this syllabus. It requires an intelligent study of the child's immediate environment and its salient features as well as the development in school of self-governing institutions and its organisation as a genuine co-operative community involving mutual obligations and distribution of duties and responsibilities.

The teaching of these subjects should not only be closely co-ordinated, but it should spring from

actual social situations—the child's home, his village, its occupations and crafts—and then be extended and enriched by stories of primitive life and ancient civilizations, and by showing how different ways of life and work have developed under different social and geographical conditions. The teaching of geography and nature study in the lower classes should, for example, be centred round the different seasons which provide a starting point for observing natural phenomena, and the intelligent teacher will take care that the children make their early acquaintance with all these phenomena through active personal observations, excursions, gardening, tending of pets and survey of the locality. But it is necessary, throughout the course, to ensure that the child acquires his knowledge actively and utilizes it for the understanding and better control of his social environment. Hence the need for correlating the school with the activities of the community life around, which we have also stressed in the Report.

In order to make Mathematics real and active, we have indicated how its various processes can be correlated with the various craft processes and it is equally possible to work out their connection with facts learned in the Social Studies and General Science courses. If the children learn their four simple rules by actually working out the problems which arise in their craft work and gardening and by dealing with figures which will also throw light on the economic and social facts of their village or town or country, if there is practical measuring and

field-work and calculations of expenditure and rural indebtedness, the learning of mathematics not only becomes an active process, but also a means of interpreting and understanding the social environment.

As a further illustration of the principle of co-ordination, we should like to make a special mention of physical education. So far as the theoretical aspect of physical education is concerned, the children will gain the necessary knowledge of Physiology, Hygiene and Dietetics through their General Science courses. As for practical training, the entire work of the school, involving craft-practice, games, gardening and active methods of learning, has been envisaged as an aid to the development of the child's health and physical vigour.

We have not drafted a regular syllabus for Music because in this scheme of Basic Education it may not be possible to give scientific training in music to all children. What we recommend, however, is that in all classes there should be a course of choral singing, set to standard tunes and time, with an elementary acquaintance with principal Indian ragas and tals. The songs suitable for children between seven and fourteen should be carefully selected and should include national songs, folk songs, devotional songs, seasonal and festive songs. The selection should also include a few songs in simple, quick rhythm suitable for group singing in connection with their craft-work and physical training. Such selections in various languages may be issued from time to time, out of which the teachers may make their choice.

It is possible to multiply such examples in connection with each aspect of the syllabus but it is not necessary to do so. These examples should suffice to show that there is an intrinsic unity of method and curriculum which cannot be ignored, and that this syllabus will help in the training of intelligent, practical and co-operative citizens only if it is approached in the spirit indicated above.

We welcome the criticisms and objections which we have received or which have appeared in the press because they show that teachers and public men have given thought to our scheme. But we feel that many of the objections raised are based on a mis-understanding of the basis of the scheme. We would, therefore, like, with your permission, to refer to the more important points raised.

1. Much criticism has been directed against the amount of time devoted to craft work, and it has been argued that academic work will be starved in consequence. Without subscribing to the implied dualism between practical and academic work, we would point out that the time allotted to the basic craft is not meant to be spent only on the mechanical practice of the craft, but oral work, drawing and expression work, naturally connected with it as well as instruction in the why and wherefore of the processes involved, *i. e.*, their scientific and intelligent understanding, which is one important educative aspect of craft work, will also be given during this time. This is clearly implied in our scheme of three-centred co-ordination.

Moreover, as pointed out in the Report, the

object of the scheme is "not primarily to produce craftsmen able to practice their craft mechanically, but to exploit the resources implicit in craft work for educative purposes"—the adoption of the activity method should ensure the attainment of this objective.

2. Some people are alarmed because there is no reference in this scheme to secondary or higher education, forgetting that our terms of reference were confined to a seven years' scheme of basic education only, and they are apprehensive that we want to limit the facilities for higher education. We have only to point out that this is a scheme of universal and compulsory basic education for all children, to be followed in due course by higher education for those who are qualified to receive it; and when that scheme is drawn up, it will have to be co-ordinated with the scheme of basic education so as to ensure continuity as well as proper intellectual equipment for those who are to proceed further with their education.

3. The scheme has also been criticised because it contemplates the child's education beginning at the age of seven, which is argued as being too late. In the Report, we have made it clear that we recognise the importance of pre-school education and envisage the possibility of its introduction on a voluntary basis, with state help where possible. But in view of the present financial and other considerations, we have not felt justified in including it as a part of our compulsory scheme. Moreover, we have chosen the 7-14 age range because we consider it

absolutely essential to keep the child at school until he is fourteen, in order to ensure that he will receive the essential modicum of social and civic training—which for psychological reasons—is not possible earlier—in order to become a better citizen, that his literary training will be thorough enough to make a lapse into illiteracy impossible, and that he will acquire sufficient skill in his basic craft to practice it successfully if he adopts it as his vocation. We are so strongly convinced of the educative importance of the years of adolescence that if we could extend the period of education, we should like to keep the students at school till the age of sixteen in order to ensure proper moral, social and civic training.

4. We have not given a separate and distinctive place to play in the scheme because it is essentially an extra-curricular activity; if it is made a compulsory part of the syllabus, it loses its spontaneity and ceases to be play in the psychological sense. But, in our syllabus, we have made provision for individual and group games and we contemplate that in all good schools there will be various kinds of games. It should, however, be borne in mind, that in an activity school play is an integral part of its method and is not included as an escape from academic drudgery.

5. We should like to make it clear—if the Report has not already done so—that we do not contemplate any direct connection between the teachers' salary and the proceeds from the sale of the children's products. Teachers are to be paid directly from the State Treasury as at present and

are not to be dependent on the somewhat fluctuating income received from the sale of school products, which should be credited as income to the Treasury. As the Wardha Conference has made it quite clear in its Resolutions that the basic crafts practised in schools were expected in due course to cover only the remunerations of teacher, it was hardly necessary for us to say that all other educational expenditure, e. g., on buildings, equipment, etc. must be met from other sources, public and private.

6. We had not specifically mentioned, in our Report, the setting up of a sales organisation for the school products, because we were primarily concerned with the drafting of an educational scheme and not with its political and administrative implications. Moreover, you had made it quite clear in your speech at the Conference that, in the last instance, the State will be responsible for their purchase at a fair price, and we had made a reference to your remark in the Report.

7. Considerable criticism has been voiced in certain quarters on the assumption that our scheme is opposed to all industrialisation and aims at harking back to a primitive state of society utterly incompatible with the forces and needs of modern times. Without entering into a controversy about the respective merits of industrialisation and the rural economy, we want to point out that there is no necessary, logical connection between the scheme of basic education and either the industrial or the small-scale village economy. We have recommended the approach to education through crafts and

productive work because that is a psychologically sound method of education, but we fail to see why co-ordinated training in the use of the hand and the eye, training in practical skill and observation and manual work should be a worse preparation for later industrial training than the present education which is notoriously bookish and academic, and definitely prejudices our students against all kinds of practical and industrial work.

We are conscious of the great deal of administrative organisation which this scheme will involve and we realize that the education department in each province will have to think out the detailed ways and means by which the scheme is to be gradually put into operation. Without attempting to take over this great responsibility on ourselves, we should like to make a few suggestions in this connection which we trust will be found useful in working out the detailed stages in which the scheme is to be introduced in India.

The first step, which should, in our opinion, be taken immediately, is to set up a number of training schools in selected rural areas—at least one or two schools in each linguistic province—where teachers may learn the technique of education through crafts and productive work and be trained to teach in the new basic schools. The number of teachers to be trained and basic schools to be opened in the selected area will be determined by the extent of that area. We suggest that a reasonably large area, *e. g.* a district, should be selected for the purpose and the Education Department should undertake a

survey of its requirements—the number of existing schools to be transformed, the number of new schools to be opened and the number of teachers needed for them. Immediate steps should be taken to train this number both by utilizing the existing training schools and by opening new ones. We are of the opinion that this work of establishing basic schools for all the children in the selected area should be completed within five years. Meanwhile, all the other training schools in the Province should be transformed into the new type of training schools, so that the work of establishing new basic schools as well as of transforming existing schools all over the Province may proceed as rapidly as trained teachers become available. It will be necessary during the first few years to have both kinds of training schools *i. e.*, one year and three year schools. The short course of one year's duration may be given to specially selected and, preferably, experienced teachers from existing schools so that they might start work a year later in the new schools. Simultaneously, however, the regular three years' courses should also be introduced and another group of teachers selected to undergo this training. The Department should arrange to send all the teachers in the existing schools who cannot attend the one year's course of training to specially organised refresher courses where they may understand the principles and methods of basic education. A scheme should be drawn up to ensure that all teachers in the service of the Department have attended such a course within the next five years.

It is essential that these training schools be located in rural areas so that teachers may work and acquire necessary experience under conditions in which they will have to carry on their teaching. If they are trained in an urban environment where they will be deprived of village contacts, they will not be able to develop the requisite attitudes and habits.

When the first batch of teachers has been trained, new basic schools should be started in a selected area where all the schools should be of the new type contemplated. It does not seem desirable that schools of the present as well as the new type should co-exist in the same area. Naturally it will be easier and more useful to select for this purpose areas in which there are few schools at present and where, for that reason, the provision of educational facilities is more urgently required.

Secondly we suggest that every training school so started should have a demonstration school specially organised to impart basic education according to the syllabus and the technique outlined in our Report. This school, like the training school, should be staffed by specially competent teachers who possess the necessary intellectual and practical disposition to work the scheme sympathetically. It will serve as a model school for the locality to which other schools to be established later will look for inspiration and guidance.

Each province should, we suggest, undertake a survey of its educational requirements and plan out a detailed programme of action. The survey should

aim at finding out the number of children to be educated, the number of teachers and schools that will be eventually required for their education, the number of training schools that will have to be established, the rate at which trained teachers can become available year after year. On the administrative side, the survey should indicate the amount of money which will be required for recurring and non-recurring expenses and the machinery that will have to be put up for the sale of the school products. These are practical and concrete problems that will have to be worked out—their magnitude is no excuse for fighting shy of them or looking upon them as impossible. We are fully alive to the financial implications of this great educational enterprise but we think that it should be possible for provincial governments to put this scheme into full working order and introduce compulsory and free universal education in the whole country in about 20 to 25 years' time. What we suggest is the drawing up of a kind of 20 years' plan to provide basic education and, to liquidate illiteracy. If this scheme is supplemented by some adequate system of adult education given through various agencies including the conscription of school and college students for the purpose, we have every hope that within that time India will have made rapid strides towards the goal of a 100% literacy.

In working out the programme of national education, the Provincial Governments should utilize the services of the Central Institute of Indian Education, the establishment of which we have recom-

mended in our report. The Institute could, for example, help in the preparation of suitable educational literature for teachers as well as advise about the preparation of books for the new schools. They could also give advice on the educational problems which may be referred to them for opinion and generally act as a central bureau for educational information. The Provincial Governments should, in their turn, give all necessary help and facilities to the Board in the discharge of its important duties.

There are also a number of other non-official organisations in the country, e. g., national educational institutions, the All India Spinners' and Village Industries Associations which could help in the working out of the scheme in various ways. We expect that there will be close co-operation between these organisations and the Education Department. We also contemplate that as a result of the enthusiasm released by this scheme of national education, many voluntary organisations and workers will be forthcoming to start training centres and basic schools. The Provincial Governments should encourage such private enterprise in education and help them with expert advice and funds.

We desire to express our thanks to all those friends who have helped us in our work by sending their suggestions and criticism and by drafting syllabuses in various subjects, which we have utilized in preparing our syllabus of basic education. We were happy to find, from some of the institutions and individuals who sent us their suggestions, that there were schools in India which had been working

already almost on the lines contemplated in the Wardha Scheme. We give, as an appendix, a list of those friends who assisted our work by formulating suggestions for our consideration.

We should like to make special mention and express our grateful thanks to the following, whose syllabuses in the various subjects were particularly helpful.

Syt. D. R. Moharikar, Deputy Director of Agriculture, C. P. and

Syt. S. R. Bhise, Hakimji High School, Bordi, for syllabus in Agriculture.

Syt. Laxmishwar Sinha of Visva-Bharti, (Shriniketan) for syllabus in carpentry.

Syt. Ramnarayan Misra, Editor, Bhugol (Allahabad) for syllabus in geography.

Syt. Tajammal Hussain (Training College, Aligarh) for syllabus in Mathematics and for very helpful co-operation with us during our last meeting at Aligarh.

Syt. W. H. Siddiqui and Mr. B. H. Zubairi (Training College, Aligarh) for syllabus in General Science.

Syt. Abdul Ghaffar and Mr. H. Rahman (Training College, Aligarh) for their syllabus in Social Studies.

• Syt. Nanda Lal Bose, Visva-Bharati, Santiniketan for syllabus in Drawing.

We also wish to express our thanks to Miss K.M. Heicman of Nava-Bharat Vidyalaya, Wardha and Miss. Gerda Philipsborn of Jamia Milia Islamia, for their willing service in all typing work in connection with the work of the Committee.

We submit this syllabus to you in the hope that it will meet with your approval and that it may form an adequate foundation for a basic education suited to the genius of the Indian nation and the requirements of the country.

Respectfully,
Sd/- ZAKIR HUSAIN (Chairman)
K. G. SAIYIDAIN
KAKA KALELKAR
KISHORLAL MASHRUWALA
J. C. KUMARAPPA
SHRIKRISHNADAS JAJU
VINOBA BHAVE
ASHA DEVI
ARYANAYAKAM (Convener).

BASIC CRAFT :— AGRICULTURE

The syllabus has two distinct parts. The first relates to the period beginning from Grade I to Grade V, when agriculture will not be taken up as a basic craft. During this period the aim will be to provide a suitable course to interest and instruct the pupils in the fundamental principles of soil management and plant growth. It will form part of the syllabus in general science. The pupils will be working on a small plot of about an acre, and will grow vegetables and other garden crops.

The second relates to the period of Grade VI & VII, when the pupils may take agriculture as the basic craft. The practical and theoretical courses for each year are so correlated that while practising

the first the second could very easily be explained to and assimilated by the pupils.

GRADE I.

N B.—Boys in this class will be seven years old. Garden work only will be done on a small portion of the demonstration plot. Boys will use only very small khurpies and watering cans. The first half year will be spent entirely in observation. Practical work as suggested below would begin in the next half-year, when the boys would be about seven years old. The theoretical portion should be dealt with in an interesting manner. Only broad facts should be given — details will be developed later on.

Time:— 1/2 an hour each week

Practical

1. Sowing of seeds in the nursery.
2. Watering the nursery.
3. Care of seedlings and plants (garden).
 - (a) Watering.
 - (b) Weeding.
 - (c) Mulching.
 - (d) Picking insects.
 - (e) Manuring the nursery and small garden plants with fertilizers.
4. Collection of seeds of flower plants and vegetables in the garden.

5. Animal husbandry,
Feeding domestic birds and animals.
Taking care of the young of pets.

Theoretical.

1. Recognition of a plant and its different parts.
Roots, stems, leaves, flowers and fruit.
2. How a plant develops from the seed.
seed, root, stem, leaves, flowers and fruit.
3. What the plant needs for its growth.
Soil, water, food, light and air.
4. Uses of birds and animals.

N. B.—In addition to the above, the boys will be taken round the fields in the village for observational purposes.

GRADE II.

Time:—1/2 an hour every week

Practical.

1. Sowing of seeds.
2. Preparation of small seed beds in boxes.
3. Preparing areas to take seedling—garden beds of small sizes.
 - (a) Digging.
 - (b) Manuring.
 - (c) Khurpi work.
4. Transplanting of vegetable and flower seedlings :
 - (a) Spacing.
 - (b) Handling.
 - (c) Planting.

- (d) Watering.
- (e) Protection.
- 5. Mulching and weeding by khurpies.
- 6. Manuring:—
 - (a) Top-dressing.
 - (b) Mixing.
- 7. Picking insects and spraying the diseased parts of plants.
- 8. Propagation other than by means of seed.
Use of cuttings—how performed—results to be noted later.
- 9. Animal husbandry.
Keeping pets and observing their habits.
- 10. Art and craft.
Preparing designs in the garden based on certain geometrical figures. Preparation of boquets and garlands. Making hanging pots for flower plants and creepers from bamboo chips.

Theoretical

- 1. How the site for a nursery should be selected and a nursery made.
- 2. Kind of soil and manure required.
- 3. Recognition of good and bad seed.
- 4. Effect of the quality of seed on germination.
- 5. Functions of different parts of the plant:—
 - (a) Root.—fixation in the soil—absorption of food.
 - (b) Stem. Absorption—carrying the food and sustaining the upper growth.

N. B.—Red ink experiment may be performed in the class room to show how the absorbed material rises through the channel.

6. Time of planting—late in the afternoon Watering—early in the morning and late in the afternoon.

7. Collection of seed. Where and how to collect.

N. B.—The boys will be taken round the farm when important operations are in progress, for purposes of observation.

GRADE III.

Practical.

N. B.—In this class, all the operations in the flower and vegetable garden will be done by the boys. They will be able to handle and work with small sized spades, forks, kudalies and other hand tools.

1. All operations done in the two previous classes to be repeated.
2. Potting the plants
3. Preparation of leaf mould and compost for pots.
4. Propagation of plants by layering Results to be noted later.
5. Rearing of caterpillars to see the four stages.
6. Mulching of flower and vegetable beds during breaks.
7. Boys to grow manured and unmanured pots to observe the difference in the growth of plants.
8. Animal husbandry. Tending the animals.

Theoretical.

1. Study of germinated seeds:—
 - (a) Embryo.
 - (b) Cotyledons.Embryo grows into plumule and radical.
Contents of cotyledons. Growth of plumule upwards, and of radical downwards. Fate of cotyledons as a plant grows.
2. Study of roots:—
 - (a) Tap root.
 - (b) Fibrous root.
3. Study of stem, division into bark and wood, nodes, internodes, buds, branches and leaves.
Difference between a root and a stem.
4. Life history of a butterfly and grass-hopper.
5. Crop pests.
Stem and shoot borer. Control measures.
6. Pot filling:—
 - (a) Material required for filling the pots.
 - (b) Qualities of a good leaf mould and the proportion in compost.
7. Necessity of manures and their functions.
The use of artificial manures
8. Disposal of night soil. Its value as manure.
9. Knowledge of the different dairy products.

GRADE IV.

Time :—1/2 an hour each week.

Practical.

1. Growing of rainy season vegetables in the garden plots.

Cucurbits, beans, brinjals, etc., (according to locality).

2. Preparation of land in the garden for transplanting the seedlings.
3. Manuring the land.
4. Laying out the land for irrigation and irrigating the crops after transplanting and thereafter.
5. Top-dressing of vegetable crops with different fertilisers. Ammonium sulphate, nicifos and nitrate of soda.
6. Percolation and capillary experiments with and without mixture of manure, lime and sand.
7. Study of different ploughs.
 - (a) Wooden.
 - (b) Iron ploughs—monsoon, J.A.T. Kokan and Ridging. Their functions by observation while they are being worked in the fields.
8. Visits to the neighbouring hills where possible to demonstrate the formation of the soil.
9. Poultry farming.
Feeding, cleaning the sheds and the runs; collecting eggs; hatching; care of chickens.

Theoretical.

1. Recognition of field crops. Division into two main groups according to the time of sowing. Rabi and Kharif.
2. Study of soil.
 - (a) Formation of soil. Agencies which bring

about the weathering and tearing of rocks.

i. Air. ii. Water. iii. Heat.

3. Recognition of soils of the locality.
4. Their classification into sandy, loamy and clay.
5. Recognition by:—
 - (a) Feel, granulation, colour, weight.
 - (b) Mechanical analysis of each.
 - (c) Physical characters of each.
 - (d) Correlation between texture and structure of a soil. Presence of air and its effect on absorption, percolation and capillary rise.
 - (e) To deduce from above the suitability of soils for kharif, rabi and garden crops.
6. Forms of soil moisture.
7. The control of soil moisture.
8. Necessity of manures and their functions. When, how, and in what quantities artificial manures should be applied.

GRADE V.

Time :— $\frac{1}{2}$ an hour every week

Practical.

1. Weeds and weeding.
2. Wooden and iron ploughs. Their functions by observation, during their use in the field.
3. Bakharing or harrowing.
Difference between ploughing and bakharing to be observed.

4. Cultivation of vegetables. In addition to rainy season vegetables, cold weather vegetables, such as cauliflower, lettuce, cabbage, knolhol. french beans, tomatoes and peas will also be grown on the plot.
5. Study of roots of cotton, jowar, tur and gram.
6. Planting of the pieces of the roots of radish and carrot, and of the stems of potatoes, arun, and ginger for the recognition of roots and stem.
7. Boys to collect many kinds of leaves and to divide them first according to veins and later on into simple and compound leaves.
8. Boys to observe and to note the time of opening of flowers in their garden.
9. Compost making from weeds and other vegetable matter collected in the garden.
10. Field experiments to be carried out in special small plots, set aside in the garden for observation purposes to note the effects of manuring, weeding and mulching.
 - (a) Manured versus unmanured plots with the same crop and uniform treatment in other respects.
 - (b) Weeded versus unweeded plot.
 - (c) Crop weeded and hoed versus weeded only.

Theoretical

1. Kinds of weeds.
2. Necessity of weeding. Where and how to weed.
3. Effect of cultivation on weeds.
 - (a) Deep for perennials.
 - (b) Shallow for annuals.

4. Utility of mulching during the after-rains.
The effect on
 - (a) Absorption and retention of soil moisture for rabi crops.
 - (b) Weeds.
5. Country and iron ploughs to be compared.
Difference in—
 - (a) Make.
 - (b) Work.
 - (c) Advantages of monsoon plough over the country plough.
6. Kind of work a bakhar does. The difference between the working of a plough and a bakhar. Effect of bakharing rabi lands during breaks in rains.
7. Formation of roots and their division into two root systems. Tap and fibrous.
8. Modification of the roots and stems.
9. Observation of roots such as the radish, sweet potato and carrot, and stems such as potato, arun, ginger, and their distinguishing characters.
10. Adventitious roots such as on banyan tree, jowar, wheat and creepers.
11. Study of flowers, as regards the arrangement of parts, colour, smell and the time of opening.
12. Method of preparing manures. Cow-dung manure and urine earth.

GRADE VI.

Time:—3 hours and 20 minutes every day.

N.B.—Boys will be required to work in the fields, and carry out all operations in growing crops.

Practical.

1. Yoking bullocks to bakkar and ploughs, and straight driving.
2. Growing of suitable crops of the tract. Cultivation in detail from preparation of the land to threshing and cleaning of grain of some of the locally grown rabi and kharif crops.
3. Working of all necessary implements used in raising field and garden crops. Hoes, seed-drills, ridging-ploughs and cultivators.
4. Cultivation of garden crops—chillies, sugarcane, potato, arun, ginger, turmeric, peas etc.
5. Storing of cow-dung in pits and conservation of urine by urine earth system.
6. Growing sann hemp for grass manuring.
7. Manuring the fields with cow-dung and urine earth.
8. Green manuring with sann hemp for garden crops and rice if locally grown.
9. Use of liquid manures.
10. Rotation practiced on the farm to be demonstrated.
11. Collection of flowers and their classification according to parts.
Observation of which insects visits the flower and what they do there.

12. Horticulture.

Propagation of plants:—

(a) Guavas by "Ghootee."

(b) Oranges and roses by "budding."

- (c) Mangoes by “enarching” and “grafting.”
13. Planting of propagated plants:—
- (a) lay out, (b) digging of pits, (c) filling and manuring of pits, (d) planting of plants. (e) spacing of plants according to size, (f) Irrigation, (g) pruning of fruit trees and shrubs.
14. Field experiments to be carried out in special small plots set aside in the garden, and observations noted down in each case.
- (a) Rotational.
 - i. Same crop to be grown continuously in the same plot.
 - ii. Same crop to be grown in rotation with a suitable crop.
 - (b) Cultivated and bakhared versus cultivated and trampled plots in black soil. Observation to be made during rains. To explain absorption and importance of frequent stirring during rains and conservation of moisture at the end of the season for rabi crops.
 - (c) Growth of plants to be observed in surface and subsoils, plants to be grown in pots filled with both soils.

Theoretical.

1. Storing of seed.
2. Test of good seeds:—
 - (a) Gravitation.
 - (b) Germination percentage.
3. Preparation of seed-bed according to the size of the seed.

- (a) Fine for fine seeds.
- (b) Coarse for big seeds.
- 4. Methods of irrigation.
 - (a) preparing beds, (b) flood, (c) principles to be kept in mind according to the texture and situation of the soil.
- 5. Soils.
 - Comparison of surface and sub-soil.
 - (a) Depth at which separation occurs.
 - (b) Feel, granulation and colour.
 - (c) Stickiness and wetness.
 - (d) Amount of organic matter present.
 - (e) Difference in the fertility of the surface and sub-soil.
 - (f) Care to be taken while ploughing not to bring the sub-soil to the surface.
- 6. Necessity of ploughing.
 - (a) Destruction of weeds and insects.
 - (b) Clearing the fields.
 - (c) Turning the soil.
 - (d) Formation of plant food.
 - (e) Retentive capacity of cultivated and uncultivated land.
 - (f) Effect on Rabi crops.
 - (g) Necessity of monsoon ploughing and constant bakharing during breaks in the rains.
- 7. Study of farm crops.
 - (a) Recognition of crops grown in the locality, attention to be drawn to:—
 - i. Time and method of sowing.
 - ii. Seed rate per acre.
 - iii. Distance between the rows.

- iv. Various operations performed during its growth. How and why ?
 - v. Harvesting time.
 - vi. Outturn per acre.
8. Ploughs and bakhar to be studied.
- (a) Their various parts and the work done by each.
 - (b) Comparison of working of a bakhar and disc harrow.
 - (c) When the disc harrow is used:—to crush the clods and prepare tilth to simplify the working of a bakhar in weedy land.
9. Study of other harrows:—their work and purpose.
10. General principles to be given in the class-room regarding the ways, methods, and time of plant-propagation, oranges, mangoes and guavas.
11. Cultivation of fruit trees to be taken in details.
- (a) Oranges. (b) Lemons. (c) Guavas. (d) other fruit trees.
12. Rotation of crops.
- (a) Its necessity. (b) Purpose. (c) Effect on fertility. (d) How to arrange it.
13. Detailed study of sugar-cane crop.
14. Manures in details with classifications:—
- (a) Plant is built up of gaseous matter and ashes. Where does each come from ?
 - (b) The main ingredients of manure:—nitrogen, potash, and phosphorus.
 - (c) Effect of each on the plant growth.
 - (d) Bulky and concentrated manures.
 - (e) What crops can be used for green manuring. Time for green manuring.

15. Other methods of preserving the fertility of soil : Rotation, judicious cultivation.
16. Detailed study of field and garden crops continued.
17. Plans and estimates for the construction of simple sheds and stables with practical training wherever possible.
18. Practice in the elements of smithy and carpentry necessary for mending agricultural implements.

GRADE VII.

Time: 3 Hours and 20 minutes every day.

Practical.

1. Threshing, winnowing and cleaning of crops raised, after harvesting them. Fitting of a winnowing machine to clean different crops.
2. (a) The boys to study the pests on the crops they have grown.
(b) Preparation of insecticides and spraying.
3. Study of flowers, continued.
4. Raising of crops to be continued—field, garden and fruit.
5. Preparation of gud.
6. Experiments to be performed to show that plants give out oxygen in assimilation.
7. Dismantling and re-fitting of sugar-cane crushing mill.
8. Turnwrest and Sabul ploughing. Dismantling and re-fitting the above two ploughs.
9. Animal husbandry.

Care of animals:—Better housing, cleanliness proper feeding, when at light or hard work.

10. Dairying.

Milking and preparing products from milk.

How to judge good milkers

Chief points to be remembered and demonstrated.

11. Cattle diseases.

(a) Treatment of ordinary cases such as wounds, inflammations, skins diseases, etc.

(b) Contagious diseases.

Observations of such animals and their treatment.

12. If possible, the pupils may run a co-operative shop in the school.

13. Farm accounts.

The boys to keep complete account of the school farm, to work out profit and loss per crop as well as for the whole farm on prescribed registers.

14. Field experiments to be carried out in special small-sized plots set aside in the garden and observations noted down in each case periodically, and conclusions drawn at the end of the trial.

(a) Thick planting versus proper planting.

(b) Crop grown in plot exposed to sunlight versus crop shaded from sunlight.

(c) Observation on plant growth and water holding capacity in sandy soil versus sandy soil manured with humus, heavy soil versus heavy soil manured with humus.

- (d) Observation of effect of exposure to weather of soil cultivated when wet or dry.

Theoretical

1. (a) Seed drills.
(b) Threshing machine Olpad.
(c) Winnowing.
2. Pests :—
(a) What are pests ?
(b) Natural and artificial means of checking them.
(c) Harmful and beneficial insects.
3. Flowers and fruits :—
(a) Flowers studied in detail with reference to male and female elements.
(b) Pollination as a means of fertilisation and the agencies of pollination.
(c) Division of fruit into dehiscent, indehiscent, dry and pulpy.
(d) Means of seed dispersal.
4. Exhalation of oxygen from the leaves.
(a) Nutrition.
(b) Green colour and the effect of sunlight.
Transpiration—Means of decreasing and increasing transpiration.
5. Implements.
(a) Sugar-cane crushing mill.
(b) Fodder cutter.
Cost, out-turn and working expenses of each.

6. Special method of eradicating.
 - (a) "Kans":—bundling the fields, uprooting in rains by deep ploughing followed by constant bakharing during breaks in rains and after.
 - (b) "Nagarmotha" by growing sann crop in the field.
 - (c) "Dub" by deep ploughing in hot weather and constant bakharing during breaks in rains and after.
7. Effect of deep and shallow ploughing on perennial weeds and insects. Deep and shallow ploughing according to the soil and season. When and with what purposes the spring and spike tooth harrows are used.

8 Cattle breeding.

Principles of breeding and rearing of cattle.
Selections of good bull, suitable cows; cross
and in-breeding and proper selection.

9. Cattle diseases

- (a) To distinguish a sick animal from a healthy one.
 - (b) Segregation of sick animals.
 - (c) Care of sick animals. Housing and feeding.
General precautions to be taken to protect one's herd from contagious diseases.
10. Detailed study of field and garden crops continued.

11. Co-operation.

(a) Instruction or principles of co-operation in a village.

Its advantages.

12. Farm account.

(a) Stock book.

(b) Classified contingent register.

(c) Cash book.

(d) Diary.

(e) Muster-roll, weekly and monthly.

(f) Ledger.

13. Preparation of final yearly accounts and how to work out profit and loss.

N. B.—Revision of the portions taught in the previous classes in soils, cultivation, manures, crops, etc. The boys would continue to work in the field throughout the year in crops grown by them.

Cropping to suit cotton tract with lift irrigation facilities

(Substitution of other staple crops to suit local conditions not likely to affect the revenue.)

1. Acreage 20 acres.

2 Cropping:—

Sugar-cane	...	...	2	„
Fruit	...	...	4	„
Garden Crops	...	...	6	„
Cotton, juar, groundnut	...	...	8	„

Total ... 20 „

			Rs.
3.	Total receipts	...	1,910
4.	Total recurring expenditure including depreciation	...	910
5.	Net profit	...	1,000
6.	Requirement of non-recurring nature	...	6,000
7.	Requirement of recurring nature for the first year	...	900
8.	Total amount required to start	...	6,900

No further amount will be required to keep the plot running from year to year unless there is a crop failure due to unforeseen circumstances.

Where irrigation is available from a cannal, the non-recurring expenditure can be reduced by Rs. 1,450. Saving in labour is expected to meet irrigation charges. In C. P., these are Rs. 15 for cane and Rs. 10 for garden crops.

Proposed cropping programme to suit cotton tract with lift irrigation facilities

Details of expenditure

Crop	Area			Other Land			Total Expenditure	Average Outturn per acre	Expected Receipts	Net Profit
	Labour	Char-	Reve-	Rs.	Rs.	Rs.				
		ges.	nue							
Cane	2.00	164	130	6	300	200	400	100		
Fruits	4.00	210	190	12	412	150	600	188		
Garden Crops	6.00	210	250	18	478	125	750	272		
Cotton, juar, ground-nut in equal areas	8.00	52.6-8	45.9-4	22	120	20	160	40		
Total	20.00	636-6-8	615-9-4	58	1310	...	1,910	600		
Deduct savings due to boys' labour		400			400					
	20.00	236-6-8	615-9-4	58	910		19,10	1,000		

If land revenue is not charged, it will go to make up a sinking fund to meet any unforeseen contingencies. Fruit area may take some years to bear but during this period, other garden crops can be shown in between the plants and income maintained.

LIST OF REQUIREMENTS OF NON-RECURRING NATURE FOR THE PLOT

Serial No.	No. required	Name of articles	Cost.
1	20	Acres of land	2,000
2	...	Good well with enough supply of water for 2 rahats	750
3		Fencing	500
4	2	Rahats	700
5	3	Pairs of Bullocks	350
6	1	Turnwrest plough	35
7	2	Jat ploughs	24
8	2	Bakhars	10
9	1	Planet Junior Hoe	40
10	4	Ordinary Hoes	10
11	1	Ridging plough	45
12	1	Planker	5
13	2	Country ploughs	4
14	1	Argara	4
15	1	Nari	3
16	3	Yokes	4
17	4	Shivals	2
18	2	Carts	80
19	4	Chains	8
20		Ropes etc.	10
		Hut for bullocks with room for implements and cattle	300
21	1	Sprayer	50
22	1	Phawaras	12
23	12		

24	6	Pickaxes	9
25	12	Sickles	6
26	12	Picks	6
27	12	Khurpas	6
28	12	Weeding Torks	18
29	2	Balances with weights	10
30	1	Kodo measure	4
31	1	Augur	2
32	1	Basula	2
33	1	Bindhna	1
34	1	Axe	1
35	2	Crow-bars	5
36	6	Digging forks	30
37	2	Secateurs	10
38	6	Budding knives	18
39	6	Pruning knives	12
40	6	Ghamelas	6
41	1	Winnower	160
42	1	Cane crushing mill	150
43	1	Pan	30
		Olpad Thresher (where wheat	
44	1	will be grown)	45
45	2	Cows	80
		Feed of bullocks and cost	
		of plants etc. for the first	
46		year	300
47		Miscellaneous	50
Grand total			<u>Rs. 5,910</u>

The total investment of non-recurring nature required works out at Rs. 5,910 or in round figures

Rs. 6,000. The land value has been calculated at Rs. 100 per acre. It is possible to get land cheaper in nearer towns.

An additional provision of Rs. 900 to meet recurring expenditure for a year would be enough to get the plot into running order.

BASIC CRAFT—SPINNING.

Grade 1. First Term.

1. The following processes should be taught during this term :—
 - (a) Cleaning cotton.
 - (b) Preparing slivers from carded cotton.
 - (c) Piecing.
 - (d) Spinning on the takli with the right hand;
With the fingers;
On the leg above knee;
On the leg below the knee;
 - (e) Spinning on the takli with the left hand,
but the twist to be as the right hand twist.
The three methods as above.
 - (f) Winding yarn on to the winder.
2. Spinning on the takli should be taught alternately with the right and the left hands.
3. The speed at the end of six months, including winding, should be $1\frac{1}{2}$ latti (hanks of 160 rounds) of 10 counts yarn in three hours.
4. The average daily speed for the six months should be $\frac{3}{4}$ latti of 10 counts yarn—i. e. the total production of 144 days is 27 goondis.

(hanks of 640 rounds), weighing one seer $1\frac{1}{2}$ pows.

Grade I. Second Term

1. In this term carding should be taught.
2. At the end of six months the speed of carding (including the making of slivers) should reach $2\frac{1}{2}$ tolas an hour.
3. At the end of six months the speed of spinning on the takli, including winding, should be 2 lattis of 10 counts yarn in three hours.
4. The average speed of spinning on the takli for this term, including carding, should be $1\frac{1}{4}$ lattis of 10 counts yarn in three hours. The total production will be 45 goondis weighing $2\frac{1}{4}$ seers.

PRACTICAL PROBLEMS IN CONNECTION WITH THE MECHANICS OF SPINNING

1. If a greater amount of yarn is wound on the takli, why is the rate of revolution of the takli reduced ?
2. If the yarn is loosely wound on the takli, why does the rate of revolution of the takli decrease ?
3. Why do we apply ash while spinning in order to increase the rate of revolution of the takli ?

Grade II. First Term

SPINNING

1. Ginning should be taught in this term.
2. At first, ginning should be taught with a

wooden plank and a steel rod. When the speed has reached 1 chatak in $\frac{1}{2}$ hour the village ginning charkhas should be introduced.

3. The speed of ginning at the end of 6 months should reach 20 tolas of cotton in $\frac{1}{2}$ hour.
4. The speed of carding (including the preparation of slivers) at the end of the term should reach 3 tolas per hour.
5. The speed of spinning on the takli (including winding) at the end of the term should reach $2\frac{1}{4}$ lattis of 10 counts yarn in 3 hours.
6. The daily average of spinning on the takli (including carding) for the term, should reach $1\frac{3}{4}$ lattis of 12 counts yarn in three hours. The total production will be 63 goondis weighing 2 seers 10 chataks.

Grade II. Second Term

1. In this term, students should be taught spinning on the Yeravda Charkha, with double-handed spindle-holders (Modies).
2. Spinning on this charkha should be taught with the right and left hands alternately.
3. The speed of carding (including the making of slivers) at the end of the term, should reach $3\frac{1}{2}$ tolas per hour.
4. The speed of spinning on the takli (including winding), at the end of the term, should reach $2\frac{1}{4}$ lattis of 12 counts yarn in three hours.
5. The speed of spinning on the charkha (including winding) at the end of this term should reach $3\frac{3}{4}$ lattis of 16 counts yarn in three hours.

6. During this term the processes of calculating the count of the yarn produced should be taught. The child should be able to do the work both practically and with intelligent understanding of the theory involved.
7. The daily average speed of spinning (including carding), for the term, on the charkha should be $2\frac{1}{2}$ lattis of 14 counts yarn. The total production will be 90 goondis weighing 3 seers $3\frac{1}{2}$ chataks.

PRACTICAL PROBLEMS IN CONNECTION WITH THE MECHANICS OF SPINNING

1. The advantages and disadvantages of keeping the spindle of the charkha parallel to the ground or at an angle.
2. What should be done in order that the pulley may revolve exactly in the middle of the modhia ?
3. Where should the charkha be oiled ?
4. Why should the charkha be oiled ?
5. Why does the charkha move more smoothly after oiling ? Here the principle of friction should be explained to the children. Also, they should notice the effect of oiling the hinges of a door, a swing, and the pulley for drawing water from a well.

Grade III. First Term

SPINNING

1. In this term the students should be taught to

recognise the different types of cotton. They should also learn to estimate the length of fibre and to understand the count of yarn which can be produced from each different type of cotton.

2. At the end of the term, the rate of carding (including the preparation of slivers) should reach 4 tolas an hour.
3. At the end of the term, the speed of spinning on the takli (including winding) should reach $2\frac{1}{2}$ lattis of 12 counts yarn in three hours.
4. At the end of this term, the speed of spinning on the charkha (including winding) should reach $3\frac{3}{4}$ lattis of 20 counts yarn in three hours.
5. The daily average speed of spinning (including carding) of the term will be $2\frac{1}{2}$ lattis of 20 counts yarn in three hours. The total production will be 90 goondis weighing $2\frac{1}{4}$ seers.

Grade III. Second Term

1. At the end of the term the speed of spinning on the takli (including winding) should reach $2\frac{3}{4}$ lattis of 12 counts yarn in three hours.
2. At the end of the term the speed of spinning on the charkha (including winding) should reach $4\frac{1}{4}$ lattis of 20 counts yarn in three hours.
3. The daily average speed of spinning for the term (including carding) will be $3\frac{1}{4}$ lattis of 20 counts yarn in 3 hours. The total production will be 117 goondis weighting 2 seers $14\frac{1}{2}$ chataks.

PRACTICAL PROBLEMS IN CONNECTION WITH THE MECHANICS OF SPINNING & CARDING

1. What is the advantage of the moving modhiya ?
2. What is the reason of slippage ? and how should it be prevented ?
3. What is the effect on carding of a tightly or loosely strung gut on the carding bow ?
4. What are the uses of springs in the Yeravda Charkha ?

Grade IV. First Term

SPINNING

1. During this term the students should be taught the following subjects with the correlated theoretical knowledge:—
 - (a) How to find the strength and evenness of the yarn.
 - (b) How to calculate the resultant speed by the formula S/C where S is speed and C is count.
2. In this term the student should learn to repair the ginning charkha and the carding bow.
3. At the end of six months the speed of spinning on the charkha (including winding) should reach $4\frac{1}{2}$ lattis of 24 counts yarn in three hours.
4. The daily average speed of spinning (including carding) for this term should reach $3\frac{1}{2}$ lattis of 24 counts yarn. The total production will be 126 goondis weighing 2 seers 10 chataks.

Grade IV. Second Term

1. In this term the students should be taught the following subjects:—
 - (a) A knowledge of the different parts of the Yeravda Charkha and how to repair it.
 - (b) The preparation of bamboo taklis.
2. At the end of the term, the speed of spinning on the takli (including winding) should reach 3 lattis of 14 counts yarn in three hours.
3. At the end of the term, the speed of spinning on the charkha (including winding) should reach 5 lattis of 28 counts yarn in three hours.
4. The daily average speed of spinning (including carding) for the term should be $3\frac{1}{2}$ lattis of 28 counts yarn in 3 hours. The total production will be 126 goondis weighing $2\frac{3}{4}$ seers.

THE MECHANIC OF SPINNING

1. The speed of spinning is increased by a pulley of a smaller diameter. But why is it more difficult to wind the yarn ?
2. What should be the distance between the centres of the two wheels of the Yeravda Charkha ?
3. Why is the actual number of revolutions less than the calculated number of revolutions ? (friction).

Grade V. First Term

SPINNING

1. In this term the students should be taught ginning and carding on the Andhra method, and

- spinning yarn to 40 counts ; but the spinning should continue to be on the Yeravda Charkha.
2. At the end of the term the speed of spinning (including winding) should reach 2 lattis of 40 counts yarn in 2 hours.
 3. In this term the students should also be taught to spin on the Magan Charkha.
 4. The speed of spinning on the Magan Charkha (including winding) at the end of the term should reach $2\frac{1}{2}$ lattis of 24 counts yarn in an hour.
 5. The daily average speed of spinning (including ginning and carding) for the term on the Yeravda Charkha should reach $1\frac{1}{4}$ lattis of 40 counts yarn in 3 hours, and on the Magan Charkha (including carding) $1\frac{1}{2}$ lattis of 24 counts yarn.
 6. The total production for six months will be 45 goondis of 40 counts yarn weighing $\frac{1}{2}$ seer 1 chatak and 54 goondis of 24 counts yarn weighing 1 seer 2 chataks.

Grade V. Second Term

1. In this term the student should be taught to spin yarn to 60 counts.
2. The following subjects should be taught with the correlated theoretical knowledge:—
 - (a) The length of yarn necessary to produce 1 yard of cloth ;
 - (b) The necessary twist required in one inch of yarn for a particular count.

- (c) The ratio of the revolution of the spindle to the revolution of the wheel.
3. In this term the students should also be taught how to straighten the spindle.
 4. During this term the students should also gain a comparative knowledge of the different types of charkha, such as the Yeravda Charkha, the Magan Charkha and the Savli Charkha.
 5. At the end of the term the speed of spinning on the takli (including winding) should reach 3 lattis of 16 counts yarn in three hours.
 6. At the end of the term the speed of spinning (including ginning and carding) 60 counts yarn should reach 2 lattis in 2 hours, and the speed of spinning (including carding) 28 counts yarn should reach 3 lattis in one hour.
 7. The daily average speed of spinning during this term will be $1\frac{1}{4}$ lattis of 60 counts yarn and 2 lattis of 23 counts yarn. The total production will be 45 goondis of 60 counts yarn weighing 6 chataks and 72 goondis of 23 counts yarn weighing 1 seer $4\frac{1}{2}$ chataks.

THE MECHANICS OF SPINNING

1. Why does the pulley lean on the slanting side of the spindle ?
2. If the rate of revolution of the spindle is to be increased, which should be increased, the diameter of the driving wheel or of the intermediate wheel ?

3. Uses of the different kinds of mal (cotton, gut and leather). Principle of belting.
4. Uses of jyotar.
5. Whereabouts should the carding-bow be held ? Principle of balance.
6. The advantage of keeping the two mals of the Savli charkha parallel.
7. Where should the handle be kept in the wheel of the Yeravda Charkha, according to the grain of the wood ?
8. What is the effect and difference in the friction of wood on wood and wood on iron ?
9. Where should the pulley be set in the spindle ?
10. The differing effect of brass, ball iron and wood bearings on the axle of the wheel, from the point of view of friction, with regard to iron axles and wooden axles.

WEAVING SECTION

1. The craft of weaving is so wide in scope that it is not possible to give the students a complete training in this craft in two years. Two alternative courses have been suggested. A school may provide for both the courses allowing the student to choose one. In either case, however, the course of two years will serve only as an introduction, and a student who wishes to have a complete knowledge of this handicraft should continue his training after this period.
2. At this stage the student will be only 13-14 years old. The course described is therefore of an elementary nature:

3. At the end of five years the student should have a fairly high knowledge of spinning. It has, therefore, not been included in the school timetable, but the students should continue to spin at home, and the school should make the necessary arrangements for the students to get the proper value of yarn produced at home—either in money or in cloth.

Grade VI—Weaving

First Year

1. The course of weaving has not been divided into half-yearly terms, but into two terms of a year each, in consideration of the special nature of the craft of weaving.
2. The following processes should be taught to the student in the first year :—
 - (a) Winding.
 - (b) Reeling.
 - (c) Joining ends.
 - (d) Warping (on the warping frame).
 - (e) (i) Spreading and distributing.
 - (ii) Sizing.
 - (f) Double-wrap weaving (on the hand-loom),
3. At the end of the year the speed on the above processes should be as follows :—

(a) Widening	5 goondis in an hour.
(b) Reeling	3 goondis in an hour.
(c) Joining ends	2½ punjams 60 holes of a reed) in an hour.
(d) Warping	2½ do.

- (e) (i) Spreading and distributing } Both the processes in 3
(ii) Sizing. } hours.
(f) Weaving (with 2 yards in 3 hours.
filled bobbins)
4. In a year the total length of cloth woven by each student with all the processes should be 108 yards.

Grade VII—Weaving

Second Year

1. In this year, too, the student should continue training of double warp weaving—but he should also be taught pattern-weaving, such as honey-comb towels, coloured coatings, etc.
2. During this year, the student should learn to calculate, with the correlated theoretical knowledge, the particular count of yarn necessary for a particular type of punjam.
3. The speed of weaving at the end of the year (on the fly-shuttle loom with filled bobbins) should be $3\frac{1}{2}$ yards in three hours.
4. The total amount of cloth woven in the year by each student should be 216 yards.

MECHANICS OF SPINNING AND WEAVING

1. The principles of lever.
The uses of the different kinds of levers should be explained by practical work in connection with the hand-loom.
The uses of the lever in the loom for shedding motion.

2. Principles of wedge and corkscrew, practically, in connection with the ginning machine.
3. What will be the effect on the count of yarn and speed of spinning, if the spindle of the takli be made of wood instead of iron ?
4. What will be the effect on the speed of spinning if the disc of the takli is light or heavy ?
5. What is the relation, and proportion in size and length, of the spindle and the disc ?
6. What should be the position of the disc on the takli ?
7. Advantages and disadvantages of the U and V shaped pulleys.
8. Necessary information re : deflection of beams. What is the effect of graining on strength of wood ?
9. Principle of crank in connection with the Magan Charkha.

General Mechanics

1. The advantage of supporting the upper wheel of the mill on the central pin. A lever can be used for increasing or decreasing the pressure on the lower wheel.
2. The pulley used for drawing water from the well is a kind of lever.
3. What is the difference in strength between horizontal, upright and sloping pillars ?
4. The pendulum of the clock.
5. Resultant of forces—to be taught by practical application.

TAPE AND DUREE WEAVING

Grade VI. First Year

1. In this department the students should be taught the following subjects:—
Twisting the yarn.
Rope-making.
Preparing the warp.
Preparing the heddle.
Weaving tapes, durees, asans, and carpets of different designs.
2. In the first year the students should be taught to weave white and coloured tapes, lace, white and coloured asans, and white durees.

TAPE AND DUREE WEAVING

Grade VII. Second Year

1. During this year the students should be taught how to weave coloured durees and carpets. The whole year will be devoted to this work as the durees and carpets will be of different designs.

A SEVEN YEARS' COURSE OF CARD BOARD, WOOD AND METAL AS THE BASIC CRAFT.

The course has been divided into two parts:—

(a) A course of card-board work.

(b) A course of wood and metal work.

1. As children under nine are not able to handle hard materials such as wood or metal, or the

more difficult tools necessary for wood or metal work, card-board work should be taught as the basic craft for the first two grades of the course.

2. Wood work should begin in grade III and work with metals used in connection with wood-work should be introduced in grade V.
3. In grades VI and VII the student may choose either wood or metal work, according to his natural inclination.
4. There is also an optional course of wood and metal work as basic craft for grades VI and VII and an optional course of card-board work for three months in grades VI and VII.
5. In order to draw the fullest educative value from card-board and wood-work as a basic craft, the following conditions must be fulfilled:—
 - (i) The system of instruction to be employed should be methodical, and must be imparted by trained teachers in a systematic way. Skilled artisans cannot be expected to convey to the students the fullest educative value and implication of the training in handicraft.
 - (ii) A well-chosen pedagogical series of models of exercises should be furnished as a guide for instructions. These models must be useful objects which can be used in daily life, but they must also be simple and beautiful from the aesthetic point of view. Therefore this series of models must, from its very nature, vary in the light of its utility in rural and industrial areas.

CARD-BOARD WORK

Grade I.

Time required—2 hours per day

1. Practical. A series of exercises which mean the modification of materials such as card-board, paper and cloth, by means of one or more tools or instruments in a prescribed way and for a particular end. Thus the method embraces say 20 models, of which at least eight must be made by every scholar during the first year of schooling:—
 - (1) Routine board (for school or class use).
 - (2) Box for collection of specimens (nature study work).
 - (3) Simple albums for
 - (a) History work.
 - (b) Nature-study work.
 - (4) Blotting-pad.
 - (a) simple.
 - (b) double.for use of school and also for sale.
 - (5) Portfolio.
 - (6) Note-book binding.
 - (7) Book-carrier.
 - (8) An extra model.
2. Theoretical
 - (1) Tools and their uses.
 - (2) Simple measurements involving the use of
 - (a) inch, foot and the metric system.
 - (b) weights—seers, chataks and tolas.

- (3) Counting—simple problems in addition and subtraction.
- (4) Recognition of simple geometrical forms.

CARD BOARD WORK GRADE II.

Time required:—2½ hours per day

DRAWING:—Introduction; necessity for drawings; method of preparing such drawings.

Use of the following instruments:—Rule, set-square, compass

Parallel, perpendicular, oblique lines, and lining in.

Circle—centre, radius, circumference.

Square, quadrangle, sexagon, octagon.

Graphical representation of the children's own work.

Practical

1. Colour decorations on hand-made paper for mounting. Each child should make at least half-a-dozen sheets of paper.
 2. Execution of any eight of the following models:—
 - (a) Sliding box—for keeping brushes, pencils, pens etc.
 - (b) Slanting quadrangular tray for keeping nib, pencils, pens etc.
 - (c) Sexagonal tray for the same purpose; paper mounting.
 - (d) Sexagonal box with cover (cloth mounting).
- N. B.*—Models of Nos. (c) and (d) should be

given to the student to serve as a model in his future private activities.

- (e) Box with hinged cover.
- (f) Sexagonal box with hinged cover.
- (g) Blotting pad.
- (h) Portfolio.
 - (a) simple.
 - (b) complex.
- (i) Round box.
- (j) Two boxes of different kinds.
- (k) Album, simple, with pad leather covering.

WOOD WORK

GRADE III.

Time required:— $3\frac{1}{2}$ hours, with an interval of 10 minutes.

Theoretical and Practical work combined

1. Tools and their uses.
2. Execution of at least seven exercises (selection must be the child's—design to be supplied.)
3. Two extra models from the student's own design.

N. B.—In schools belonging to rural areas, the following models are suggested.

- (a) Handle of khurpi.
- (b) Ladder.
- (c) Small stool for water vessel.
- (d) Stand for filtering water.
- (e) A small desk for writing and reading.
- (f) (i) a small bookshelf (open), (ii) rack for keeping clothes, (iii) alna, (iv) wall rack.

- (g) A corner shelf for keeping household things.
 - (h) A simple wooden cot.
 - (i) A wooden box according to requirements.
4. Sawing, planing, method of sizing, boring, grooving, simple joinings. All these should be taught through making the objects of exercises of the pedagogical series.

WOOD WORK.

GRADE IV.

Time:— $3\frac{1}{2}$ hours daily with an interval of ten minutes.
Practical.

1. (a) Ten models to be executed.
(b) Two additional models from the student's own drawing.
(c) 4 kind of joinings.
2. Drawings and graphic representations of the exercises.
 - (a) How to draw lines.
 - (b) The use of the set-square.
 - (c) Erecting perpendiculars.
 - (d) How to obtain various angles.
 - (e) Method of setting compass.
 - (f) Use of the compass and drawing board.
 - (g) Use of rubber.
 - (h) Use of T-square.
3. Orthographical projection.
 - (a) The dihedral angles.
 - (b) Analysis of models.
 - (c) Definition of the following:—Point, line,

angle, square. circle (centre, radius, circumference.)

Theoretical

1. Growth of trees.

- (a) Notes dealing with seasoning, shrinkage.
- (b) Parts of growing trees.
- (c) Seeds, germination.
- (d) Roots and their functions.
- (e) Root food in soluble form.
- (f) Ascending sap.
- (g) Evaporation from leaves.
- (h) Carbon extracted from air.
- (i) Life-period of trees.
- (j) Time for felling.

Practical demonstration.

Transverse section of a tree

- (a) Annual ring.
- (b) Cause of visibility of rings.
- (c) Composition of rings.
- (d) Heart wood.
- (e) Sap wood.
- (f) Bark and its use.
- (g) Growth of bark and pith.

Manual training

- (a) Matter.
- (b) Measurement.
- (c) Metric system : (i) fractions, (ii) rule of three.
- (d) Weight, (Indian system as well as international and English).

- (e) Density.
- (f) Specific gravity.
- (g) Force and work.
- (h) Graphic representation.
- (i) Parallelogram of forces.
- (j) Resolution of forces.
- (k) Mechanical devices.
- (l) Levers.

Geography of Wood

Kinds of Indigenous wood

- (a) Soft wood. Hard wood.
- (b) Reeds and bamboos.
- (c) Wood-growing provinces of India.
- (d) National income from wood.
- (e) Export and import.

N.B.—The theoretical instruction should be imparted as much as possible through the practical performance of the work. The theoretical terms should be pointed out only while drawing after the execution of a model.

WOOD WORK

GRADE V.

Time:— $3\frac{1}{2}$ hours daily, with an interval of ten minutes
Practical

1. Execution of ten models of exercises.
2. Two extra models from the student's own design.
3. Colouring. High polishing.
4. Preparation of polish.

Theoretical

1. Structure of wood.
 - (a) Carbon (c).
 - (b) Oxygen (o).
 - (c) Nitrogen' (n).
 - (d) Hydrogen (h).
 - (e) Sulphur (s).
 - (f) Protoplasm.
 - (g) Charcoal.
2. Proper introduction of metals used in connection with wood-work.
 - (a) Iron: — The ore, smelting; nature of cast iron (experiment and test), Wrought iron. Conversion of cast iron into wrought iron. Steel. Experiments. Conversion of iron into steel. Properties of steel. Hardening and tempering.
 - (b) Brass. An alloy, zinc. 1 part, copper 2 parts by weight. What is an alloy ? Properties of brass.
 - (c) Copper. The ore. Process of extraction.
 - (d) Zinc. The ore. Process of extraction.

WOOD WORK
GRADE VI.

Time required :— $3\frac{1}{2}$ hours daily, with an interval of ten minutes.

During this year, the boys must work mainly on a productive basis, and can choose one of the two basic crafts, wood or metal.

Wood work

Execution of works (useful objects which must be saleable in the market).

Theoretical.

1. Notes on parts of tools and how they are made.
2. Notes on seasoning timber.
 - (a) Tree containing sap.
 - (b) Condition of wood after cutting.
 - (c) Evaporation and shrinkage.
 - (d) Necessity of seasoning.
 - (e) Different methods for seasoning.
 1. Natural seasoning,
 2. Artificial seasoning. Hot water, running stream, smoke drying.
3. Elementary knowledge of costing of the articles.

**WOOD WORK
GRADE VII.**

Time required:— $3\frac{1}{2}$ hours daily, with ten minutes interval.

1. Manufacture of articles saleable in the market and execution of commodities against local orders, if forthcoming. Each boy should be made so efficient as to earn Rs. 5 per mensem.
2. High polishing.
3. Carving.
4. Keeping accounts. Method of costing.

Theoretical.

1. The usefulness of wood in general.
2. Designing.

Proposed planned model or exercise series**Group A.**

1. Wall-rack.
2. Propellor: (a) simple, (b) for actual use.
3. Sliding box for pencil, pen, brush, etc.
4. Stools of different kinds.
5. Writing desk.
6. Pot stand.
7. Flag stand.
8. Book stand.
9. Alna of different kinds.
10. Mallet.
11. Wooden trays of different shapes.
12. (a) Table, (b) Axe handle, (c) knife handle, etc.
13. Cot.
14. Corner shelf.
15. Small almirahs with doors.

Extra models as planned by the students.

Group B.

1. Spoons of various shapes.
2. Wooden trays out of one piece of wood.
3. (a) File carriers.
(b) Wall-rack for lamp.
4. Candle stands of various shapes.
5. (a) Electric light stands of various shapes.
(b) Hanging lamp shades of various shapes.
6. Simple writing table.
7. Portable folding table.
8. Boxes of different kinds and of different types of joining.

Extra models as planned by the students.

Group C.

Small boat.

Chairs.

Tables.

Clock frames.

Ladder.

Extra models as planned by the students.

The above lists are tentative suggestions. The models executed will vary according to local conditions and requirements.

Syllabus in Metal-work for Grades VI and VII.

The underlying principles of introducing light metal work are the same as those for other work, *viz*, the modification of materials such as iron, copper, brass, zinc, or any other alloy by means of one or more tools in a prescribed way, for a particular end or object.

List of some of models to be executed.

1. Simple door lock.
2. Chain lock.
3. Khurpi.
4. Various stands for iron.
5. Paper-boring instruments.
6. Soldering instruments.
7. Screw-drivers.
8. Compass.
9. Chisel.
10. Farm knife.
11. Candle-stands.
12. Book-stand.
13. Wall candle-stand.

14. Match-stand.
15. Fruit-picker.
16. Ash tray.
17. Fruit tray.
18. Plate stand.
19. Spoon (cooking).
20. Hanging lamp.
21. Farm rake.

At least two additional objects, which must be of the student's own design, must be executed. They must be useful objects.

Theoretical and Practical work combined.

- (a) Oxidising.
- (b) Filling.
- (c) Hardening and tempering.
- (d) Blackening process.
- (e) Cleaning and polishing.

An Optional Course in card-board work for the students of

GRADE VII.

Those who have already taken card-board work during the first two years of the basic course should be given an opportunity of repeating the work in card-board, and of applying the higher technique acquired through their training in wood and metal work. Those who have taken other basic crafts *viz.*, spinning and weaving should also have an opportunity of learning something of card-board work.

A three months' Course in Card-Board Work Practical

Series of exercises, pedagogically selected, of objects required in school and office

1. Routine board.
2. Pencil tray.
3. Pencil box.
4. Sexagonal tray.
5. Blotting pad (simple).
6. Blotting pad with case for paper.
7. Letter carrier.
8. Card-board box (standing).
9. Portfolio: (a) simple, (b) complex.
10. Boxes of different shapes.
11. Note-book binding.
12. Album.

Theoretical.

1. Point, line, angles, perpendicular, parallel lines, square, circle (centre, radius, circumference).
2. Drawing graphical representations of works or models made

Measurement:—inch, foot, the metric system.

An optional course in wood or metal-work during the last two years of the basic course.

GRADES VI & VII.

Time:— $3\frac{1}{2}$ hours daily, with ten minutes' interval.
heoretical.

1. Introduction to tools:—Their use and how to handle them.

2. Introduction to drawing instruments:—Their use and how to handle them.
3. Demonstration of the use of drawing instruments on:—
Parallel, perpendicular, oblique lines.
Method of setting the compass.
Projection:—Plans, elevation, and section.
Circles:—Centre, radius, circumference.
Square, quadrangle, sexagon, octagon, etc.
4. Graphical representation of one's own work.

Practical.

1. At least 15 models are to be executed by each student, and
2. Through models, eight different kinds of joinings.
3. Polishing.
4. Colouring.

Theoretical and practical demonstration in the following:—

1. Matter.
2. Measurement.
3. Metric system: (a) fractions. (b) rule of three.
4. Weight (Indian system as well as international and English).
5. Density.
6. Specific gravity.
7. Force and work.
8. Graphic representation.
9. Parallelogram of forces.
10. Resolution of forces.
11. Mechanical devices.

12. Lever.

List of Necessary Equipment

Equipment for card-board work for a group of
30 Students Taking the Optional Course in Grade VII.

			Rs.	a.	p.
2	Almirahs	... ..	50	0	0
30	Knives	... ..	20	0	0
2	Working Benches	... ..	15	0	0
30	Scales	... ..	5	0	0
4	Iron Squares	... ..	5	0	0
30	Working Boards	... ..	45	0	0
30	Paper-Cutting Knives	... ..	15	0	0
10	Scissors	... ..	4	12	0
Materials:—Paper, card-board, cloth leather, etc.			60	0	0
			<hr/>		
			219	12	0

Equipment for a Group of Fifteen Beginners
in the Card-Board Class.

			Rs.	a.	p.
1	Almirah	... ..	25	0	0
15	Knives	... ..	10	0	0
2	Working Benches	... ..	12	0	0
15	Scales	... ..	7	0	0
2	Iron Squares	... ..	2	8	0
15	Working Boards	... ..	22	8	0
7	Scissors	... ..	2	0	0
17	Paper-Cutting Knives	... ..	5	0	0
Materials:—Paper, card-board, cloth, leather, etc.			38	0	0
			<hr/>		
			124	8	0

Equipment for Wood Work for a Group of Fifteen Students taking the Optional Course in Grades VI and VII.

Rs. a. p.

15 Single or 8 double working benches:— framed tops, hard wood, fitted with Cupboard for keeping tools, with two vices				...	...	250	0	0
15 Saws of different types	...	...	45	0	0			
30 Planes	...	...	98	0	0			
15 Scales or foot rules	...	...	15	0	0			
15 Try squares	...	...	20	0	0			
15 Knives	...	...	15	0	0			
5 Screw drivers	...	...	5	0	0			
1 Grinding stone	...	...	6	0	0			
2 Hand drills	...	...	6	0	0			
15 Mallets	...	...	15	0	0			
1 Set of Bits	...	...	18	0	0			
25 Gauges	...	...	15	0	0			
5 Compasses	...	...	2	8	0			
40 Chisels (Handled)	...	...	28	0	0			
1 Pincer	...	...	2	8	0			
15 Iron Scrapers	...	...	15	0	0			
10 Punches of different types	...	...	8	0	0			
Miscellaneous	...	...	50	0	0			
Nails, screws, wood, etc.	...	...	300	0	0			
				<hr/>				
				914	0	0	<hr/>	

Materials and Equipment required for a Group of Fifteen Students taking the course of Metal-Work in Grades VI and VII.

- 3 Anvils.
- 15 Vices.

15 Hammers.

1 Bellow.

20 Files of different types.

1 Drill.

1 Plate cutter

Miscellaneous

(Appr.)

Rs. a. p.

300 0 0

Materials:—Copper, iron & brass
sheets, etc.

100 0 0

Total

...

...

400 0 0

N.B.—The above prices are only approximate, and will vary from district to district according to local conditions.

Class Rooms.**Card-Board Working Room for a group of 30 students.**

Closed space required :—45 ft. by 26 ft.

Wood-working room.

The shape of a wood-working room depends on the arrangement of the benches. A room of 60 ft. by 24 ft. is a good size for accommodating 30 students at a time.

There should be a closed store-room attached to the working-room.

Metal-working room for a group of fifteen students.

Space required :—45 ft. by 25 ft., with a closed store room.

N.B.—Drawing work may be done in the card-board working room.

MOTHER TONGUE AND HINDUSTANI

GRADE I.

1. Oral Self-Expression.

Conversation centering round names and description of different parts of the human body, clothes, class-room, equipment and processes in craft work, natural phenomena, events in daily life.

2. Stories.

- (a) Myths and legends.
- (b) Folk-tales.
- (c) Nature myths.
- (d) Fables and stories of animal life.
- (e) Stories of life in different lands.
- (f) Tales of primitive man and life in ancient times.
- (g) Stories of school life and family life.

N.B.—Items e., f., and g., will also cover the syllabus in social studies.

3. Recitation of simple poems.

4. Dramatisation.

5. Ability to read simple words and sentences.

The work in mother-tongue will be entirely oral during the pupil's first six months in school.

GRADE II.

1. Oral Self-Expression.

- (a) Extension of the child's vocabulary—recapitulation of new words and expressions

learnt by the children in their craft work, mathematics, nature-study and social studies.

- (b) Descriptive self-expression:—describing objects, people and happenings within the child's environment; describing the different village crafts and occupations, fairs, festivals, etc.

2. Recitation and dramatisation.

3. Stories.

A continuation of the syllabus outlined in Grade I.

4. Reading.

Simple books which should contain lessons on the following:—

(a) Life of nature.

(b) The child's social environment, his home, school and village.

(c) Health and hygiene.

(d) Local Agencies of community welfare.

(e) Crafts.

(f) Festivals.

(g) Stories and legends.

(h) Life of children in other lands.

5. Writing.

Simple words and sentences.

GRADE III.

1. Oral Self-Expression.

Continuation of the work detailed in Grade II, telling of simple stories.

2. Reading.

Simple books whose material should be on the same lines as those outlined in the syllabus for Grade II together with life stories of some great benefactors of mankind, e. g., Buddha, Christ, Mohammad.

- (a) Reading aloud, with special attention to clearness of pronunciation, and expression,
- (b) Silent reading of easy passages.

3. Writing.

- (a) Writing of short sentences from dictation.
- (b) Writing of simple letters, descriptions and stories.
- (c) Daily record of weather observations.

4. Recitation and dramatisation.

GRADE IV.

1. Oral Self-Expression.

In addition to work outlined in Grades I, II and III.

- (a) Making of short speeches on a given subject in connection with craft work, social studies and general science.
- (b) Taking part in discussions on subjects of living interest.

N. B.—The above two purposes can be fulfilled by starting a discussion group or a debating club for the members of grades IV and V.

2. Reading.

The reading material in grade IV, in addition to

the topics already outlined in Grade III, should contain the following :—

- (a) Stories of village crafts and craftsmen. Stories of important arts and crafts in different lands and ages, e. g., building, cloth-making, pottery, etc.
- (b) Stories of great inventors and inventions.
- (c) Stories of great discoverers and discoveries. (see the syllabus in Social Studies).
- (d) Life of people in certain typical regions of the world.
- (e) Stories of some great benefactors and liberators of mankind, e. g., Zoroaster, Socrates, Garibaldi, Husain, Lincoln, Pasteur, Davy, Franklin, Joan of Arc, Florence Nightingale, Tolstoy, Booker Washington, Sun Yat Sen, Gandhi (to be covered in Grades IV and V).

N.B.—All these topics will be closely correlated with work in Social Studies.

3. Writing.

- (a) Creative Writing :—stories, original compositions.
- (b) Writing from dictation.
- (c) Writing of simple and business letters.
- (d) Keeping a daily and monthly record of individual and class progress in the basic craft, and other interesting experiences.
- (4) Contribution to a magazine for Junior Pupils (Grades IV and V) and preparing a news bulletin.

N.B.—Amongst other topics, this magazine should include the following :—

- (a) A monthly record of the progress of the class in the basic handicraft.
- (b) Daily and monthly weather reports.
- (c) Health reports of class, family and village.
- (d) Report of geographical and social survey.
- (e) Current events.

GRADE V

In addition to the work—oral, written and reading—outlined in the syllabus for Grade IV which will be continued, the following new items will be introduced :—

1. A simple and practical knowledge of the construction of the mother tongue and the function of words.
2. The use of the dictionary, the list of contents and the index, etc.
3. An introduction to Basic Hindustani, and its relation to the child's own language. Learning of the Urdu or Hindi script whichever is new to child (in Hindustani speaking areas) or one of them at his or her option (in other areas). Simple conversation—Primer and first reader in Hindustani.

GRADE VI

1. General Reading.

Individual reading on general subjects under the guidance of the teacher, of simple books, pamphlets and articles dealing with topics outlined for Grades IV and V together with the following :—

- (a) Recent geographical expeditions, *e. g.*, Everest, North Pole.
- (b) Work of community welfare and community hygiene, including illustrations from other countries.
- (c) Agriculture in India and in other lands. The life of the farmer in India and in other lands.

2. Study of Literature.

- (a) A representative collection of selections from the literature in the mother tongue.
- (b) Selections from the masterpieces of various Indian literatures. (Literary translation in the child's own language).

3. A more advanced study of the structure of the child's own language.

Formation of words.

Formation of sentences.

Symmetry of structure—elements of a good style.

4. Self-Expression—Oral and Written.

In addition to the syllabus outlined for Grades IV and V.

- (a) Preparing a daily news-sheet.
- (b) Editing a senior school magazine, for Grades VI and VII.
- (c) Preparing notices, announcements and advertisements.
- (d) Filling up business forms.
- (e) Writing letters of social utility—invitation, condolence, apology, etc.

- (f) Ability to give a short speech or to take part in a discussion on a given subject.
4. A more advanced study of Basic Hindustani.

Second Reader.

Writing.

Simple conversation.

GRADE VII

1. General reading as outlined in the syllabus of Grade VI.
2. Study of Literature.

(a) A more advanced selection from the best writers in the child's mother tongue, arranged chronologically and with a simple presentation of the history of the literature of the mother tongue.

(b) A more advanced selection from the master-pieces of various Indian literatures.

(c) A selection from the master-pieces of world literature, translated into the child's mother tongue.

N. B.—These text-books should also include :—

(a) A few passages of advanced literature for intensive study.

(b) Extracts from the scriptures and religious writings of the principal world religions.

3. A more advanced study of the structure of the child's own language with an elementary study of the history of that language and its relation to the other languages of India.

4. Self-Expression in speech and writing.

- (a) Continuation of the work outlined in the syllabus for Grade VI.
- (b) Preparing reports of completed work, such as health campaign, village sanitation project, etc.
- (c) Preparing plans or instructions for a proposed piece of work.
- (d) Preparing a small pamphlet on any subject chosen by the student himself.
- (c) The senior students (thirteen to fourteen years) will organise their own discussion groups and dramatic clubs like the juniors (ten to twelve years). These senior discussions and entertainments should be more intimately related to the life of the village, and should make an attempt at attracting the adult population of the village.

During the last two years, the students will be expected to organise programmes of socially useful work in the villages, such as adult education, health campaigns, the celebration of national and cultural festivals, etc. These should provide occasions for the students to give short and simple talks to the villagers on practical subjects.

5. A more advanced study of Hindustani.

- (a) Ability to make a short speech and to engage in conversation.
- (b) Writing simple and business letters.
- (c) Reading simple books, periodicals and newspapers.

MATHEMATICS**Grade I.****First Term.**

1. Counting up to 100 (with concrete objects); giving an idea that our system of counting is based upon units of ten.
2. Counting by tens, fives and twos up to 100.
3. Recognition of big and small numbers at sight.

Second Term.

1. Counting up to 160 (with concrete objects)—extension of the idea of the decimal system in counting.
2. Mental addition and subtraction. The answer should not exceed ten. Thorough mastery of addition and subtraction tables up to 10 is necessary.
3. Meaning of signs + and -
4. Simple problems in addition and subtraction up to 10.
5. Writing of numbers up to 160.
6. Simple measurements involving the use of
(a) yard, foot, inch and hath (18")
(b) seers, chhataks and tolas.
7. Recognition of simple Geometrical forms :—
Straight lines ; Curved lines ; A straight line as the shortest distance between two given points.

Grade II.

1. Numeration and notation up to 999.

2. Addition and subtraction tables up to 20.
3. Addition of two and three figure numbers in vertical and in horizontal columns, the sum not exceeding 999.
4. Subtraction from any two or three figure numbers.
5. Multiplication tables up to 10 by 10; meaning of signs \times and \div .
6. Simple multiplication of numbers, the result not exceeding three digits.
7. Short division of numbers up to three digits by numbers up to 9.
8. Practice in measuring length and weight.
Tables of money : Rupee, anna, pice and pie.
Tables of weight; Panseri, seer, chhatak and tola or corresponding local measure.
Tables of length : Yard, foot, inch, hath, goondi, latti, kalli, etc.
9. Recognition of common polygons:—
Square, rectangle, triangle and circle.

Grade III

1. Numeration and notation of numbers up to 7 digits.
2. Addition and subtraction to be continued.
Practice in the processes and in problems of every day occurrence.
3. Multiplication tables up to 16 by 16.
4. Multiplication long, the result not exceeding 7 digits.

5. Long division, by numbers up to 3 digits.
6. Reduction (ascending and descending) in measures of money, length and weight.
 - (a) Rupee, anna, pice, pie.
 - (b) Yard, foot, inch.
 - (c) Seer, chhatak, tola.
7. Simple problems in compound addition and subtraction.
8. Indian system of writing:—
Rs., as., ps. and mds, seers and ch.
9. Idea of fractions $\frac{1}{4}$, $\frac{1}{2}$, $\frac{3}{4}$.
10. Construction by manipulation of concrete objects and learning of the fractional tables of $\frac{1}{4}$, $\frac{1}{2}$, $\frac{3}{4}$, up to 20.
11. Recognition of angles:—
(acute, obtuse and right).
12. Recognition of common solids:—
Cylinder cone, sphere, cube.
13. Tables of weight, length, capacity and time.
Seer, panseri, maund, kandi.
Yard, pole, furlong, mile.
Local measures of capacity.
Second, minute, hour, day, week, month, year.

Grade IV.

1. Notation and Numeration complete.
2. Four simple rules complete.
3. Compound addition and subtraction.
4. Compound Multiplication and Division.
5. Rekha Chinna, i. e. addition, subtraction,

multiplication, and division of Rs. as. ps. and Mds. seers and chs. by the quarter system.

(*N. B.*—The division must be by a whole number and not by a fraction.)

6. Simple fractions of denominators, 10, 12, 14, 16 and 20.
7. L.C.M. by factors of the above.
8. Addition and subtraction of fractions of denominators given above.
9. Comparison of British and Indian measures of weight. Pound, seer, ton, kandi.
10. Gurs (formulae for calculation) in connection with tables of measures learnt in the 3rd and 4th years.
11. Book-keeping :—Keeping of stock-book for individual craft work.
12. Square measure, area of a square and rectangle. In this connection students will learn how to draw :—
 - (a) perpendicular to a given line.
 - (b) a parallel line to a given straight line.

Grade V.

1. Revision work in the four fundamental rules, simple and compound.
2. L.C.M. and H.C.F.
3. Vulgar fractions complete (complex fractions to be avoided).
4. Simple and Compound Practice.
5. Unitary Method.

Book-Keeping

1. Budgetting (Home, farm and festivals).
2. Keeping of stock and record books (for individual and class work).
3. Cash-book and Ledger. (Cash transactions of goods and money relating to craft, school and home).
4. Monthly statements of accounts. (Receipts and disbursements).
5. Profit and Loss account, where no stock is left at the end of the year.

Practical Geometry.

1. Calculation of areas :—
Triangle, parallelogram.
2. Circle, ratio of the circumference to diameter, area of a circle.
3. Field work, drawing areas to scale. Bigha and acre compared.

In this connection the student will learn how to make,

- (a) an angle equal to a given angle.
- (b) a triangle equal to a given triangle, rectangle or parallelogram and
- (c) to find the centre of a circle or an arc.

Grade VI

1. Reading and writing of decimal fractions.
2. Addition, subtraction, multiplication and division of decimal fractions.
3. The idea of approximation.

4. Percentages.
5. Simple Interest.
6. Profit and Loss.

Book-Keeping

1. Continuation of the work of Grade V.
2. Transactions on credit and havalas.
3. Trial Balance.

Practical Geometry

- (1) Calculation of areas, continued from the 5th years' work. Field work in connection with Patwari measurements of fields, etc.
- (2) Calculations of volumes of:—
Cube, cuboid, cylinder.
This is to be taken in connection with earth-work, making of walls, digging wells etc.

Grade VII

- (1) Revision and extension of previous work.
- (2) Ratio and proportion—rule of three.
- (3) Time, work and speed.
- (4) Simple equations representing rules and gurs for the calculation of areas, volumes, interest etc.
- (5) Graphs.
- (6) Square root.

Book-Keeping.

- (1) Trading account.
- (2) Profit and loss account.
- (3) Balance sheet.

Practical Geometry.

- (1) Revision of previous work.
- (2) Formulae for the calculation of areas, volumes.
- (3) Drawing of areas to scale.

*** SOCIAL STUDIES****GRADE I****I. The Story of Primitive Man**

How he satisfied his wants and developed the rudiments of civilised life.

- (a) His shelter—(caves, trees, lake-dwellings, etc).
- (b) His clothing or natural protection—use of leaves, barks and skins, etc., leading gradually to wool, cotton and silk.
- (c) His means of livelihood—hunting, pastoral life and primitive agriculture.
- (d) His weapons and tools—wood, stone, bronze and iron.
- (e) His means of self-expression—speech, primitive writing and drawing.
- (f) His companions and help-mates—horse, cow, dog, etc.

*Sjt. Kishorlal Mashruwala is of opinion that the approach to the teaching of history in Social Studies syllabus should be on a different principle from what is suggested in this syllabus. This would also entail changes in the Mother Tongue syllabus.

N.B.—This account of the life of primitive man should be given in the form of stories and activities likely to appeal to children's imagination.

II. Life of Man in Ancient Times.

- Ancient Egypt, Ancient China and Ancient India, to be given in the form of stories, e.g.,
- (a) The story of a common slave building the pyramids of Egypt.
 - (b) The story of the first five Chinese Emperors.
 - (c) The story of a boy in Mahenjo Daro.
 - (d) The story of Shunah Shepa (Vedic period).

III. Life of Man in Distant Lands.

Arab, Bedouins, Eskimos, African Pygmies, Red Indians.

N.B.—Much of the work can be done orally in the time allotted to the Mother Tongue, in the forms of stories and dramatisation.

IV. Training for Civic Life.

1. Life of the child in the school.

Civic training will be imparted by practical training aiming at the development of the following attitudes and habits:

- (a) Cleanliness and Sanitation.
 - (i) Personal cleanliness (refer to the syllabus of General Science).
 - (ii) Cleanliness of clothes.
 - (iii) Proper use of latrines and urinals.
 - (iv) Proper use of waste-paper basket and dustbin.

- (v) Keeping the class-room and the school cupboards clean.
- (vi) Care and proper use of the school drinking water.
- (b) **Social Responsibilities.**
 - (i) Proper greeting of teachers and school-fellows.
 - (ii) Using of clean language.
 - (iii) Asking and answering questions politely.
 - (iv) Waiting for one's turn in speaking.
 - (v) Making use of the queue system.
- (c) **Craft Work.**
 - (i) Proper use of work materials and equipment.
 - (ii) Sharing materials and equipment with others
 - (iii) Working in groups.
 - (iv) Waiting for one's turn.
 - (v) Leaving the class-room clean and replacing the material and equipment in proper order after work.
- (d) **Games**
 - (i) Fair play. (To refrain from cheating and deceiving).
 - (ii) To refrain from taking advantage of the weak.
 - (iii) Importance of truthfulness above all gain or victory.
- (e) **Discharge of responsibilities**

Besides the above mentioned practical training every child should have some definite

responsibility in the school life, either individually or as member of a group. The following responsibilities are suggested for groups of children, between seven and nine years of age :

- (i) Cleanliness of class-room.
- (ii) Cleanliness of the school compound.
- (iii) Care of the school drinking water.
- (iv) Collection of leaves, flowers, stones, feathers, bark, wood, etc., for the school museum.
- (v) Helping to decorate the school for festivals, etc.
- (vi) Entertaining the school and the village.
- (vii) Helping new students.

2. The Life of the child in his Home.

- (a) The home as an ordered community, and the part played by every member in the unit.
 - The place of father and mother in the home.
 - The place of brothers, sisters and cousins in the home
 - The place of other relations in the home.
 - The place of the servants in the home.
- (b) The child's place in the family, and his responsibilities towards the elder and younger members.
- (c) The proper discharge of particular duties assigned to him in the home.

VI. Physical Training.

- (a) Playground games :—non-equipment games common in the villages.
- (b) Imaginative and imitative games.
- (c) Rhythmical exercises.
- (d) Folk Dances.

Grade II.

- 11. Primitive Life in Modern Times :—e.g., African aborigines, Australian Bushmen, Ceylon Veddas, Indian aboriginal tribes.
- 2. Life of Man in Ancient Times.
Ancient Hebrews, Ancient Romans, Ancient India (the period of the Upanishads).
To be given in the form of stories, e.g.,
The story of Moses,—the story of Abraham.
The story of Marcus Aurelius and of Regulus the Roman.
The story of Nachiketa and Gargi.
- 3. Life of Man in distant Lands.
The life of an Afridi boy.
The life of a boy in a Swiss village.
The life of a boy in Persia
The life of a boy in Japan.
N. B.—Much of the work under headings 1. and 2 should be included with the work in the Mother Tongue in the form of stories, reading material and dramatisation.
- 4. Training for Civic Life.
Observation of life in the village.
Food, clothing, housing, occupations, water-

supply, the village bazar, places of worship, entertainments, fairs and festivals.

5. Practical.

Practical civic training under the following heads :—

(a) The child in his school.

(b) The child in his home.

Under these two heads there will be a continuation of the work outlined in the syllabus of Grade I.

(c) The child and his village.

(i) Keeping the immediate neighbourhood of the home clean.

(ii) Keeping the village roads clean (If, possible, the children should put up simple dust-bins in different parts of the village, and persuade their family and friends to use them).

(iii) Refraining from dirtying the village well.

(iv) Entertaining the village by participating in school celebrations.

(v) Kindness to animals.

6. Physical Training.

As outlined in Grade I.

GRADE III.

1. Life of Man in Ancient Times

Ancient India (Buddhist period) Ancient Persia,
Ancient Greece.

To be given in the form of stories, *e. g.*—

Buddhist India,

The story of Buddha.

The story of Ashoka.

The story of Mahendra and Sanghamitra.

The story of a Buddhist Missionary in Central Asia or China.

The story of a student of Nalanda.

Ancient Persia :

The story of Kava, the blacksmith.

The story of the battle of Thermopylae.

The story of an Indian physician at the court of Darius the Great.

Ancient Greece :

The story of a Greek slave.

The story of Socrates.

The story of a young man taking part in the Olympic games.

The story of Pheidippides (Marathan race).

The story of Alexander.

The story of Megasthenes.

2. Life of Man in Distant Lands.

The story of a boy in New York.

The story of a boy in China.

The story of a boy in a Russian Kolhoz or collective farm.

The story of a boy in an Indian tea plantation.

N. B.—Much of the work under headings 1 and

2 will be included with the work in the Mother Tongue in the form of stories, reading material and dramatisation.

3. Study of the District (including a guided tour of the district, if possible, with reference to:—
Relief, general feature, climate, crops, industries, local historic monuments, means of communication, places of worship.

N. B.—During this tour, the work should be elementary and general. It should be carried further and made more precise during the industrial survey of the district to be carried out during the year.

Practical Work

- (a) Important features to be filled in an outline map of the district.
- (b) Making of Plans : Making plans of the classroom, the school building, the school-compound.

4. Study of the Globe :

Shape of the Earth.

Land and water spheres.

Principal sea-routes (to be studied on slate globe)—

India to Europe, India to Far East, India to Australia, India to Arabia and Africa, Europe to America.

5. A study of the Village Community.

- (a) The village and its administration. The village officers. The village panchayat,—its functions.

- (b) Village amenities-markets, dispensary, post office, cattle pound, roads, playground, nearest railway station.
6. Practical Work.
- (a) Organisation of the School Panchayat on the lines of the village Panchayat.
- (b) Organisation of social service groups, (boys and girls between the ages of 9 and 12) for the following:—
7. Civic Activities:—
- (i) Protection and cleanliness of streets and wells.
- (ii) Protection of crops from destructive animals.
- (iii) Organisation of games and amusement for children under 9.
- (iv) Organisation of entertainments for the children and adult population of the village.
- (v) Participation in national and seasonal festivals.
- (vi) Preparations of posters, signs, etc.
- (vii) Volunteer-work in village fairs, festivals, etc.

GRADE IV.

- I. The Story of Ancient Times.
Ancient India, Buddhist China, Greater India, Early Christians.
1. The Story of Ancient Times.
(a) Ancient India:
The stories of Samudragupta, Kalidas, Aryabhatta, an Arab merchant trading in India,

an Indian trader carrying his merchandise to foreign countries, Harshavardhana, Prithviraj, an Indian physician at Hurun-ur-Rashid's court.

(b) Buddhist China.

The story of the Chinese pilgrims, Fahien and Hiuen Tsang.

(c) Greater India :

The story of an Indian merchant or artist, sailing to Java or Siam and setting down there for his work.

(d) The story of Christ and the Early Christians; Syrian Christians.

II. Study of Man's Geographical Environments:

1. An Industrial Survey of the District:

Practical. Preparation of a map of the industries of the district. Preparation of a "guide book" as a co-operative effort.

2. Geography of the province with reference to its natural divisions, climate, agriculture, industries, communications.

3. Distribution of hunting, fishing and forest occupations in the world.

Practical Work. A relief map of the province in clay or mud, as a co-operative effort; making of maps, charts, plans and diagrams.

4. The story of the explorations of the World Marco Polo, Vasco da Gama, Columbus.

5. The various methods of ginning and carding used at different times and in different countries.

III. Training for Civic Life.

- 1 A study of the town as organised community, with reference to the following points:—
 - (a) Relation to the village—their mutual interdependence—migration from village to town.
 - (b) The administration of the town—municipality—rights and duties of citizens—taxes, police, law courts.
 - (c) Social services: hospitals, child-welfare centres, libraries and reading rooms, post office, water-works, street lighting, playgrounds, akharas
 - (d) Places of worship: Respect for all places of worship.
 - (e) Amusements and entertainment: Theatres, cinemas.
 - (f) Centres of education: University, Colleges and Schools, Industrial Schools.

Practical Work.

- A guided trip to the nearest town if possible.
2. Study of Current events:
through the daily reading of newspapers in reading circles—correlated with map-study in geography and with work in the Mother Tongue.
3. Practical.
 - (a) Organisation of self-governing units in the school on the principles of local self-government.

- (b) Organisation of social service groups with activities outlined in the syllabus for grade I.
 - (c) Celebration of national, religious or seasonal festivals.
 - (d) Organisation of newspaper-reading circles, and discussion groups on current subjects.
4. Civic Activities.
- Continuation of work outlined for Grade III.

GRADE V

- I. The story of Muslim Civilisation in India and the World.
- (a) Life story of Mohammad with the social and geographical background of Arabia.
 - (b) Some heroes of early Islamic history : Omar, Ali, Husain, Caliph Abdul Aziz.
 - (c) The beginning of Muslim contact with India—Muslim travellers and merchants—Mohammad bin Kasim, Khwaja Moinuddin Chishti.
 - (d) The story of the development of Indo-Muslim culture (given through concrete examples).
 - (i) Interaction of the Hindu and Muslim religions, through the story of Amir Khusro, Kabir, Guru Nanak, Akbar and Dara Shikoh.
 - (ii) Development of a common social life :—Food, dress, amusements, common fes-

- tivals, social customs and etiquette.
- (iii) Development of a common political life and administrative system : Sher Shah, Akbar, Todar Mull.
 - (iv) Language and literature :—Persian as literary and court language ; Hindu writers and scholars of Persian, and Muslim writers and scholars of Sanskrit and Hindi ; Patronage of Sanskrit, Hindi and Bengali, etc., by Muslims ; Development of Hindustani as a common language.
 - (v) Arts : Music : Development of Indo-Muslim music : Amir Khusro, Tan San, Painting : Mughul, Rajput and Kangra Schools of Painting. Architecture: Kutub Minar, Fatehpur Sikri, Taj Mahal. Calligraphy and illumination of manuscripts.
 - (vi) Handicrafts : weaving, dyeing and printing, gold and silver smithy, lace-work, carpet-making, gardening.
- (e) Life stories of the following personalities with special reference to the social conditions of their times :—Alberuni, Ibn-i-Batuta, Feroz Shah Tughlak, Babar, Chand Bibi, Nur Jehan, and some mystics and saints, such as Dadu, Kavir, Nanak, Baba Farid.
- (f) Contribution of Islamic civilisation to the world—Ali (as a man and as a scholar) Balal (the negro democracy) Haroon-ur-

Rashid (Patronage of Learning); Salah-ud-din (representative of Muslim chivalry); Abdur Rahman III (Moorish culture in Spain). Extent of the Muslim empire in the world (in correlation with Geography)—

II. Studies of Man's Geographical Environments :

1. Geography of India, with reference to its natural division, relief, climate, natural vegetation, crops, means of communication, industries, trade, population, political divisions and linguistic areas.

Practical Work.

- (i) Maps, charts and diagrams showing different features of the geography of India.
 - (ii) Map of the world showing the extent of the Muslim Empire.
2. A Study of the different regions of the World with reference to the following occupations : Commerce, agriculture and industries.
Practical Work : Maps, charts and diagrams.
 3. Story of the discovery of the world : Livingstone ; Cook, Peary, Shackleton.
 4. A history of the spinning technique in India and other countries (to be taken during the craft period). Oral information, discussion and written composition.

III. Training for Civic Life:

1. Study of Current Events through:
 - (a) Group reading of newspapers

- (b) Editing a daily news sheet.
(To be taken with the language period).

2. A study of the district under the following heads:

- (a) District and local boards and the public utility services as organised and controlled by them : agriculture, irrigation, co-operative organisations, sanitation, and public health, medicine and education.
- (b) Administration : Administrative Sub-divisions; the district officials and their duties—law courts and police.
- (c) Agencies of social service.
- (d) Means for entertainment and popular education.

3. Civic Activities:

Continuation of the work outlined in Grade IV.

GRADE VI

1. History of India with special reference to the modern period.
 - (a) The story of the disintegration of the Moghul Empire—Shivaji and the rise of the Marathas.
 - (b) The decline of the Indo-Muslim culture.
 - (c) The story of the early European merchants, traders, soldiers and missionaries in India.
 - (d) The story of the British occupation of India.
 - (e) Ranjit Singh and the rise of the Sikhs.

2. The influence of the civilisation of the West on Indian culture to be studied with reference to the following aspects:—

- (a) Religion.
- (b) Social Life.
- (c) Political and economic life.
- (d) Language and literature.
- (e) Education.
- (f) Industries, Arts and Handicrafts.

N. B.—The approach to this study should be concrete, *i. e.*, through actual examples, not theoretical or philosophic.

3. A History of the Indian National Movement.

4. A History of the Textile Industry in India —its decay (to be taken in connection with the craft work.)

II. Study of Man's Geographical Environment.

- 1. An outline geography of the main regions of the world with fuller treatment of Eurasia (to show the reaction of geographical conditions on the life and occupation of the people.)
- 2. Recent explorations—Everest Expeditions, Russian Expedition to North Pole.

III. Training for Civic Life:

- 1. A detailed survey of the religious, social, economic and cultural life of the village, to be carried out by the students under the guidance of the teacher.
- 2. Practical Work. As the practical expression of the survey, the organisation of a senior social group, consisting of boys between the ages of

12-14 which the following activities as possible basic work :

- (a) The systematic study of the region in the light of the economic and cultural needs of the people.
- (b) Sanitary and hygienic inspection of dwellings, village roads and wells, protection and cleanliness of the village drinking water, and village roads.
- (c) Protection against flies, bed-bugs, malarial mosquitoes and other parasites.
- (d) Gathering of medicinal herbs and their cultivation for local distribution.
- (e) Organisation of popular lectures on health and hygiene.
- (f) Propaganda for preventive measures against infectious disease.
- (g) Organisation of adult education in the villages—reading of journals and newspapers, organisation of kirtans, kathas and popular lectures. Spread of literacy.
- (h) Care of forests, groves and other natural beauty spots—care of old mosques, temples and other historical monuments.
- (i) Propaganda against all forms of injustice in the village.
- (j) Organizing centres of craft training for the adult population of the village.
- (k) Organising national and religious festivals. Organising entertainments and games for the children and adult population of the village.

GRADE VII.

The Study of the Modern World.

1. Science in modern life—conquest of the forces of nature through scientific inventions and discoveries and their application to life :
 - i. Development of rapid means of locomotion—railways, motor cars, steamships, aeroplanes.
 - ii. Development of rapid means of communication of ideas—press, telephone, telegraph, radio, television.
 - iii. Development of modern industry—The Industrial Revolution.
 - iv. Science and Public Health.
 - v. Science and Agriculture.
 - vi. Science in everyday life—food, clothing, lighting, building.
 - vii. Science and modern warfare : the misuse of power over nature.
(This aspect of modern history will be closely correlated with work in General Science).
2. The story of industrialism and imperialism in the modern world.
 - i. Growth of industrialism and capitalism in the countries of the West and the growth of the industrial civilisation.
 - ii. Growth of imperialism as a result of industrial civilisation. Exploitation of the races of Asia and Africa by the industrial nations of the West and by Japan.

- iii. The world war(1914-1918).
- iv. The story of socialism as a world force as a reaction against capitalism and imperialism. The story of the U.S.S.R. as an experiment in industrial and socialist civilisation.

3. Democracy in the modern world.

- i. The meaning of democracy.
- ii. Democratic institutions and communities in Ancient and Mediaeval India.
- iii. The story of the American Republic.
- iv. The story of the French Revolution.
- v. The development of present Indian constitution in outline—its limitations.
- vi. The story of the suppression of democracy in Europe.

N. B.—These topics should be presented and studied in simple and broad outline with the object of giving the student a proper orientation towards the modern world.

2. Current Events :

- (a) The present international situation (in broad outline).
- (b) Forces working for international justice and peace :
 - i. The League of Nations, its activities and its failures.
 - ii. Peace organisations.
 - iii. The Satyagraha movement as a world force.

3. Outstanding Problems of Modern Indian Life :
 - (a) Social. Rural Reconstruction.
The problem of untouchability and the Harijan Movement.
Social Reform amongst Muslims.
The position of women in modern India.
 - (b) Political. The history of the National Movement (continued). Indians overseas.
 - (c) Economic. Decline of handicrafts and industries under the British rule.
The problem of poverty in India.
Revival of handicrafts under the Swadeshi and the Village Industries movements. The beginnings of industrialisation in India.
 - (d) Language. Multiplicity of languages in India : the importance of Hindustani as the national language.
 - (e) Cultural. Movements for the revival of Indian culture—and national education.
4. An elementary knowledge of the economic geography of the world, with special reference to the countries with which India has economic relations.
(To be initiated by the study of the village bazar or the district fair).
5. History of the technique of weaving in India and in other lands, (in correlation with the craft of spinning and weaving).
6. Practical activities. Continuation of the work laid down for grade VI.

GENERAL SCIENCE

GRADE I.

1. Naming and recognition of principal crops, trees, animals and birds in the neighbourhood.
2. Direction finding with reference to the sun; the seasons of the year; observation of changes due to change of season; effect on trees, plants, birds, insects, reptiles and man.
 - (a) The colour of trees at different times of the year; the falling of leaves; chief parts of a plant; recognising the difference between a leaf, a root and a stem; the bulbs as store-house of future nourishment; potato, onion.
 - (b) Insects fewer in winter than in spring and rain. Snakes during the rainy season. Where do they go in winter?
 - (c) Change in the clothing of man; how does clothing protect against cold?
3. We are surrounded by air, at all times; air is a real substance; man breathes and lives in air; the air is in motion in the winds and in the school-room.
4. Sources of water (river, spring, tank, well); circulation of water; evaporation, sun, clouds, dew and rain; observations of loss of water through evaporation.
5. Fire must have air to burn; be careful with fire; don't run if clothing catches fire.
6. Developing habits of cleanliness; cleaning of the body; cleaning of the face, hands, nails and

teeth ; use of the Datoon ; cleaning of clothes ; washing with various materials available in the villages.

(Insist on observation by the pupils. Organise frequent excursions. Prepare pupils beforehand for possible observations)

7. Stories of how from the earliest time the world over, man has been observing the sun, the moon and the stars and utilising this knowledge for counting time and finding out direction

Stories about farmers, travellers, sailors and generals of armies ; how they have profited by the knowledge of astronomy.

The rising and setting of the sun and moon.

The child is to be encouraged to observe that the same stars that set in the morning are to be seen to rise a little after sunset in the evening.

Phases of the moon ; the bright and the dark half of the month ; what they actually mean.

Observation of the exact points of sunrise and sunset and the rays of light as they fall from the window on the wall opposite; the winter solstice and the summer solstice (22nd December and 22nd June).

Finding the northern point by observing the Pole Star and the Great Bear.

Observation of the eclipses of the sun and moon if there are any during the year.

8. Physical Education.

1. Posture drills.

(a) Sitting—secure good posture.

(b) Standing—secure good posture. Ease of

movement, when rising. Drill in quietness and ease of movement.

- (c) Breathing: head up, chest out; inhale, exhale through the nose.
- (d) Dismissal : plan by which to save unnecessary waste of time, *e. g.*, give commands : Rise, stand, march, all march in single file.

GRADE II

1. Recognition of :
 - (a) General form and size,
 - (b) General form of the stem and bark,
 - (c) General form of the leaf,
 - (d) General form, size and colour of the flower,
 - (e) General form and size of the fruit and seed of at least five common trees of the neighbourhood.
2. Recognition as in 1-5 above of at least 10 vegetables and crops grown in the neighbourhood; knowledge of the time of sowing and harvesting and the period of germination.
3. General appearance, mode of locomotion, food, and the call or cry of at least 4 domestic and 3 wild animals of the neighbourhood. Pond-life; the frog and the fish; How do they breathe; From the tadpole to the frog.
4. Birds; general form, size, colour; mode of flight, nesting and feeding; breeding season, size, form and colour of eggs of at least five birds usually found in the neighbourhood; making

a bird-fountain and a bird-table in the school-yard.

5. Observation that there is dust in the air; haze due to dust on a summer day; the dust-storm; beam of sunlight in a semi-darkened room; diseases caused by dust; how to minimise dangers due to dust
6. Water—its importance to plant, animal and human life; pure and impure water; common infections carried by water; the village-well. (In 1—6 insist on direct observation; direct the pupils' attention to what he has to observe).
7. Practical directions as regards breathing through the nose; value of fresh air; healthy habits of sleep.
8. The day, the month and the year are not arbitrary units but they depend on natural astronomical phenomena.
 The day caused by the earth's rotation round its axis; division of a day into 24 hours or 60 ghatis, the latter being a more natural unit.
 The Month caused by the moon's circling round the earth from full moon to full moon or from new moon to new moon, the month being made up of nearly 30 days.
 The seasons:—winter, spring, summer, rains, autumn.
 The eclipses of the sun and the moon. What causes them?
9. Physical Education.
 As in Grade 1.

GRADE III

1. Plants require food, water and sunlight.
Comparative produce of equal plots with different manure, water and light provision.
Water dissolves substances ; food of plants in solution ; function of roots, stems, leaves, flowers and seeds.
2. Seeds and germination ; at least 3 seeds, one from each of the following groups :
 - (a) maize, wheat, barley,
 - (b) pea, cotton, pulses,
 - (c) neem, castor.(to show the difference between dicot and monocot seeds and that between hypogeal and epigeal cotyledons.)
How seeds are scattered : by wind, animals, by force from the fruit, by water.
3. At least three domestic animals in more detail : the cow, the cat, the dog ; how they care for their young :
Interdependence in nature ; animals dependent on plants ; man dependent on plants and animals.
4. Spiders and insects in the neighbourhood ; recognition ; their food, home and habits ; house-fly ; from eggs, larva or maggot ; pupa to the fly ; the breeding places of the fly ; fly the reporter of dirt and the carrier of disease ; how to get rid of the flies that infest the homes.
5. Experiments to show the difference between air

breathed in and air breathed out ; nature of combustion ; importance of ventilation.

6. Pure and impure water ; how to purify water, decantation, filtration, and boiling.
7. Cleanliness at home ; disposal of night soil, cow-dung and filth ; their value as manures.
8. Wholesome food and healthy eating habits ; proper sleep and exercises.
9. (Extended over Grades 3 and 4).

As in No. 7 of Grade 1 and No. 8 of Grade 2, but in greater detail.

The most important and characteristic constellations and their fancied shapes.

The students should be encouraged to observe and draw the figures of the constellations. They should be asked to make their own groupings of the stars.

GRADE IV.

1. Plant physiology ; leaves as organs of transpiration, respiration, and carbon assimilation. Roots and their functions ; root hairs, how water passes into the roots.
2. The Village pond ; water-birds ; their food, habits, songs ; where and how they nest ; their migration.
3. Insect life ; the mosquito ; from the wriggler to the mosquito ; mosquito and health problems ; where do mosquitoes breed ; malaria and its prevention ; loss to the village community due

- to malaria ; the bee and the ant ; the division of work and social organisation.
4. Spiders, scorpions and snakes ; the characteristics of spiders ; how to distinguish them from insects ; utility to man ; destruction of harmful insects.
Recognition of poisonous and non-poisonous snakes ; non-poisonous snakes as helpers of the agriculturists ; first aid measures in case of scorpion and snake bite.
 5. The three states of matter : water as solid, liquid and gas ; distillation and condensation.
 6. Experiments to show that air is a material, a gas occupying space ; experiments to show that air has weight and causes pressure ; experiments to show that gases, liquids and solids expand and contract with change in temperature, experiments to show how evaporation cools.
 7. Human physiology : the respiratory and the circulatory system ; common infections and contagious diseases : cholera, plague, small-pox and malaria ; how produced ; how to prevent their spreading.
 8. See under No. 9 of Grade III.

GRADE V.

1. Continuation and recapitulation of plant and animal study with reference to :
 - (a) flower, its parts and functions,
 - (b) seed and fruit formation,
 - (c) dispersal of fruits and seeds,

- (d) methods of vegetative propagation of plants (cutting, grafting, layering etc.)
 - (e) insects and birds that help in dispersal of seeds,
 - (f) poisonous and non-poisonous snakes ; symptoms of poisoning and first aid measures in case of snake and dog-bites.
2. Different kinds of food and their nutritive value ; the digestion of food ; the digestive system ; what to eat ; when to eat ; the common drinking cup, its dangers.
 3. Air : its composition ; impurities ; its purification ; the function of trees in purifying air ; air in a crowded room ; methods of ventilation ; draught ; atmospheric pressure ;
 4. Water : composition, impurities ; its purification ; cholera, dysentery, typhoid and guinea-worm produced by impure water ; precautions and safe-guards.
solution ; solubility, saturated solutions, crystals.
 5. Compass ; magnetism ; properties of a magnet.
 6. Lightning and thunder, frictional electricity, simple voltaic cell.
 7. Stories of eminent scientists, their search for truth.
 8. The solar system:—the nine planets—the comets. the planets, their satellites, the rings of saturn. The zodiacal light.
- Geography of the moon ; days when the moon is nearest to the earth and the day when the earth is nearest to the sun.

GRADE VI & VII.

1. A thorough review of work done in previous grades.
2. A study of the acids, alkalis and salts with examples from everyday life.
3. A comparatively thorough knowledge of the human body, its parts and their functions. The human body a fortress.
 - (a) Outer wall : the skin.
 - (b) Watchmen on the wall : Sense organs, sight, sound, smell, taste, touch.
 - (c) The Fort :
 1. Air—respiratory system.
 2. Posters—circulatory system.
 3. Food and its distribution—alimentary system.
 4. Sewage—excretory system.
 - (a) Skin.
 - (b) Kidneys.
 - (c) Breath.
 - (d) Bowels.
 5. Defence—Bacteria.
 6. Officers and Intelligence—nervous system.
4. Health education to be particularly emphasised during these two years; preservation and improvement of health as against restoration; the individual and social duty to be well; causes of ill-health; ignorance, carelessness, poverty, intemperance in food, drink, work and pleasure. Tuberculosis, Leprosy : their causes, symptoms and prevention; the individual suffering and social loss involved; the

need for individual alertness and social control to prevent diseases; the pupils during these two years should undertake an active health campaign in the village.

5. All pupils before leaving school should have acquired :
 1. The daily bath habit,
 2. The daily exercise habit,
 3. The fresh air habit,
 4. The moderation-in-all-things-habit,
 5. The laughing habit,
6. The story of the earth and the story of the evolution of life to be told in a simple way.
7. The story of man's conquest of nature briefly and simply told. The story of the control of diseases. The story of communications and industries.
8. Simple mechanical appliances in the home ; levers, pulleys and screw appliances; pendulum, clock; work and working capacity; steam engine; internal combustion engines; acquaintance with magnetism and the magnetic field The electric battery, the electric current, the electric bell.
9. First Aid to the injured : punctured wounds, cuts & bruises, burns, accidents to the nose, dog bite, snake bite, fractures and dislocations; application of splints and bandages, foreign bodies in eye, ear and nose; drowning; artificial respiration; transport of the injured.
10. Lives of at least 5 eminent scientists and their experiments with truth.

11. The law of gravitation illustrated by the motion of the moon round the earth. The transit of Venus. The falling stars, nebulae. Astronomical distance—(light years)—distances of the stars. Stars of the first magnitude and their distances. What is the Milky Way? Shapes of the nebulae.
- The Calendar. The Solar and the Lunar systems of the calendar, Intercalary month (Adhik-mas) Pope Gregory's reform. The modern proposals for reform. How to know the exact time of night or day by watching the position of the sun or the stars; the date by watching the phase of the moon; and the month by watching the position of the moon in the constellations, and the season from the particular stars that rule the nights. How to find the direction from the stars. Modern achievements. What is spectrum analysis? The observatories at Ujjain, Jaipur, Sekanderabad and Kodaikanal—Greenwich, Mount Wilson. What is in the interior of the stars?

DRAWING.

GRADE I.

Noting colours in relation to each other—red

with green, yellow with black. recognising colour in flowers, trees, fruits and birds.

Correct names of the colours. Colouring of hectographed outlines.

Idea of form and relation.

Blue sky and green fields : with crayon and then cut in coloured paper.

Different shaped leaves to be traced and comparative form be shown—pipal leaf, banana leaf etc.

Form of common vegetables and fruits, usually a large size (pumpkin, brinjal, carrot, melon, mango).

Memory drawing of objects seen around them with coloured crayons.

Note : Care should be taken to teach correct position and necessity for moving whole arm in drawing.

GRADE II.

Drawing of objects connected with daily lessons. Illustrative representation to be usually in black or brown crayola, if possible with colours. Simple designs for borders with triangles, circles, semi-circles, simple flower units drawn or cut in coloured paper.

Landscape to be done with colour only—with river trees, birds etc.

Drawing and cutting tree form with foliage.

Animals with their colours ; common vegetables with foliage.

Practice for free arm movement and correct position.

GRADE III.

Drawing of objects used in other lessons and in the home, from memory.

Scenes from home life.

Practice in drawing of trees, houses and animals, using action lines.

Designing of borders with squares, oblongs and circles, colouring them differently, i.e., orange, green and purple.

Blending of colours—red and blue, blue and yellow, in two tones of gray.

GRADE IV.

Some landscapes, flowers, leaves and butterflies in colours.

The near and far relations in nature and object-drawing. The appearance of the near tree and the distant tree.

Drawing with the help of geometrical figures, flowers, leaves ; in one colour and in several colours, complementary harmony and analogous harmony.

Decorative designs according to local tradition, (e. g. Rangoli, Alpona).

Mounting drawings on harmonising back-ground.

Sketching of children and animals in action.

Action should be shown by match-stick.

Posters illustrating some lessons in social-studies or general science for group work.

GRADE V.

Closer visual analysis and faithful execution should be insisted on here. Work done in previous grades might be repeated with greater thoroughness.

Proportion, arrangement, relation of objects, colour, values, massing, to be carefully studied.

Standard, tints, shades ; warm and cool colours, colour charts ; colour scale in nature drawings made.

A leaf in different positions, sprays of leaves, pods in pencil, ink and colour by throwing shades on the walls.

Landscape for book covers, outlining masses with black.

Illustration of history, science and literature lessons.

Pose drawing from children in action, and from animals studied.

Poster for a 'school day'.

GRADE VI.

Continue work in object drawing and designing.

Make an animal book for children of Grade 1 to be presented to them on the occasion of some festival.

Make posters for some social service campaign in the village. (group work).

Scale drawing : making of plane scales ; the use of scales in the construction ; reducing, enlarging and copying of plane figures.

GRADE VII.

Continue work in object drawing and designing.

Make a book of 4 landscapes for children of Grade II, decorating the little page with a coloured design.

Make posters for some social service campaign in the village.

Plans, elevation, and sections of solids in simple position.

Drawings and sections of objects to be made in the craft class.

The students of Grades I, II and III, should use only colours as far as possible; black and white may be introduced afterwards. Tracing from good pattern, and drawing pictures should be continued throughout the seven years (grades I to VII).

Possible Correlations with the Basic Craft
of spinning and of weaving.

The elements of the curriculum which we have recommended are closely correlated with one another because we have made an attempt to relate them integrally to the life and environment of the child. By making the craft the centre of education, we are anxious to make the whole process of education real for the child by providing concrete learning situations for him. Therefore, the three central points round which we have built up the curriculum are the child's social environment, the child's physical environment, and the basic craft which connects him to both. We indicate below the possibilities of

correlating the various items of the curriculum with the basic craft in each grade to show that a considerable amount of the subject matter to be learnt can be integrally related to the craft-activities of the child.

It is unnecessary to point out correlations with the other two centres, *i. e.* the social and the physical environment because they are obviously covered by the syllabuses in social studies and general science.

GRADE I

Mathematics :

Counting of the number of records while winding the yarn on to the winder ; counting of the slivers given out for spinning; the number of the accessories of spinning, such as taklis, winders.

An idea of the decimal system by counting the fingers of the hand, by arranging objects in groups of ten, *e. g.* taklis, winders, hanks of yarn; by forming boys on drill in lines of ten each and by giving out slivers for spinning in bundles of ten.

Addition tables can be constructed by keeping scores at spinning competitions, counting different objects and performing the operation of addition by arranging them in heaps.

Subtraction tables by counting the slivers given over for spinning and left over after spinning is finished.

Measuring of thread and weighing of slivers given out for spinning will enable them to arrive at

mathematical results, e. g. units of measure, lines curved and straight.

N. B.—Counting and writing of numbers up to 160 is needed in spinning and winding as 160 rounds make a lati, 16 rounds a kali and 1 round equalling 4 ft. a tar.

Social Studies :

Clothing of the primitive man—use of leaves, barks and skins, leading gradually to the use of wool, cotton and silk. (1 b.).

Dress of men in different lands—the Arab, the Eskimo, the African Pigmy. Dress in cold and warm countries. Cleanliness of clothes.

General Science :

Names and functions of different parts of the cotton plant, changes in the clothing of man with the change of seasons. How does clothing protect against cold and heat? Effect of humidity on carding and spinning. Morning time for the picking of cotton. Germination of the cotton seed.

Drawing :

Drawing of the cotton plant, cotton flower, cotton pod.

Mother Tongue :

Naming the various tools used in the craft, describing the various processes of picking, carding and spinning with the takli; harvest songs and folk songs connected with spinning.

GRADE II.

Mathematics :

Acquaintance with bigger numbers in spinning and winding exercises as 640 rounds make a goondi.

Addition and subtraction tables by practical work in spinning and winding, by counting exercises in preparation of slivers and thread. Easy problems in addition and subtraction from practical work in spinning and winding.

Exercises in measuring and weighing in connection with the basic craft to be continued to introduce them to measures of length, weight and money, commonly used in the locality.

Multiplication tables to be constructed by students when counting in groups of ten, five and two.

Social Studies :

Dress of primitive man in modern times (1),

Dress in ancient times (2)

Dress in distant lands (3)

Clothing of different classes of people in the village (too little too much—swadeshi—foreign), style of dress.

General Science :

Form and size of the cotton plant (II); stem and bark of the cotton plant; form of the leaf of the cotton plant; form, size and colour of flower of the cotton plant; the seed of the cotton plant; time of sowing and harvesting and the period of germination, (V). Cotton plug to prevent dust getting in.

Drawing :

Drawing the cotton plant, the cotton flower.

Mother Tongue:

Oral description of processes involved in the craft work. Reading matter to be provided should contain lessons on items mentioned above under Social Studies and General Science.

Writing of the names (nouns) of instruments used in craft and the processes (verbs) involved, writing short sentences about them.

GRADE III**MATHEMATICS:**

Numeration and notation in connection with

- (a) statistics of the produce of cotton in the village, district, province and country, and figures of export of cotton and of import and export of cotton cloth.
- (b) population of the village, the district, the province and India, engaged in the basic craft.
- (c) the areas under cultivation: of cotton, wheat, etc.

(These will supply data for problems and exercises in addition and subtraction with bigger numbers).

Multiplication and division as the shortest way of performing addition and subtraction of equal numbers to be taken up by the distribution and by taking back of slivers, taklis, winders and bundles of cotton, by calculating numbers of objects required

for distribution and the numbers received from a heap by individual students.

Tables of weights and measures to be studied in actual exercises in weighing and measuring in the course of craft work.

A study of the Charkha to gain familiarity with common solids, *i. e.* cylinder, cone, sphere, etc.

The ideas of quarter, half and three quarters to be given to children practically, by making heaps of cotton, or cotton seeds.

Exercises in reduction (ascending and descending) can be taught by practical work in calculating wages of spinning per child, per class and per length of yarn spun per class.

Social Studies:

1. Dress in Buddhist India, (dress of Bhikshu).
Ancient Persia and Ancient Greece. Beauty and simplicity of dress in ancient times (No. 1).
2. Description and significance of dress (under No. 2 dress for work, leisure and sleep).
3. Production of cloth in the village—approximate consumption per head, quantity produced in the village and imported from outside (No. 3).

General Science:

Experiments with the cotton plants to illustrate germination of the cotton seed (No. I).

Disposal of the cotton seed (No. II).

Dependence of man on cotton plant (No. III)

How to keep clothes clean—washing with various materials available in the village.

Drawing :

Drawing of dresses of primitive people.

Mother Tongue :

Oral description and discussion of craft process; silent reading of written instructions about the craft work.

Relevant reading material in the text.

Keeping a daily record of work done in craft.

GRADE IV.**Mathematics :**

The bigger numbers to be taken from figures of the occupational census and from statistics of production, export and import etc.

Calculation of wages earned in craft work will introduce them to compound multiplication.

Simple book-keeping in connection with work in basic craft, keeping an account of materials used, and goods sold.

Social Studies :

Indian trade in cloth in olden times (No. 1).

More detailed information about production, consumption of cloth in the village and the district (No. II : 1).

Centres of cloth-production in the district (II : 2)

The role played by cloth trade in Indian history; importance of trade routes from Indian to the West; the urge to find a sea-route (II : 5)

The number of producers of cloth in the village, in the district ; number necessary to produce all the

cloth required ; variations of this number with the variations in the methods of production ; textile mills, the migration from village to town, its extent ; its dangers, need for planning. (III : a)

General Science :

Experiment with cotton plant to illustrate No. 1.

Experiment with cotton to show that air occupies the space between the fibres ; carded cotton, increased volume of air in the intervening space, air, non-conductor of heat ; lihaf and razai. (IV).

Drawing :

Posters and Charts to represent graphically information relating to crafts under Social Studies.

Mother Tongue :

Oral presentation and discussion of relevant information under social studies given above. Relevant reading material in the text book and in the books for supplementary reading (II : a)

Writing about relevant facts under social Studies ; descriptions of processes in craft and experiments in General Science ; writing simple letters to elicit information from the A.I.S.A., A.I.V.I.A ; the District Council or Village Panchayat (III, C)

Keeping a daily or monthly record of individual and class progress in the basic craft (III, d)

GRADE V.

Mathematics :

Practical problems in the calculation of wages,

quantities of yarn spun, and yearly produce and expenses.

Practice method of calculation with reference to prices of yarn, cloth and wages.

Book-keeping to be continued by keeping detailed accounts of the work in the basic craft and the school co-operative shop.

Social Studies:

The simple dress of the Prophet of Islam; how cloth was produced in Arabia at the time; (I, a).

Indo-Muslim dress; (I, d, u). Improvement in cloth-production; weaving, dyeing and printing; carpet-making; (I: d, vi). Chief centres of cloth trade (I) with a study of their climatic and geographical conditions; state protection and patronage; the land and sea-routes of cloth-trade; flourishing trade with the West; privately—owned and State factories.

The study of the different regions of the world with reference to the production of cloth, cotton and wool areas; (II, 4).

The whole of No. III.

Possibilities of organising sale of khadi-cloth on a co-operative basis; the organisation of its production and sale in the district; importance of khadi in the present economic life of India.

General Science:

Study of the cotton plant in greater detail as required under No. I.

Drawing:

Drawing of illustration for relevant information

under Social Studies, General Science given above.

Careful study of the cotton leaf and pod in general pencil, ink and colour.

Mother Tongue and Hindustani :

A good deal of relevant reading matter can be provided in the text-book, and in books for supplementary reading.

Letters to different organisations to elicit information about Khadi production and sales, about possibilities of co-operative organisation.

The keeping of necessary records of craft work.

Hindustani names of instruments and processes involved in the craft.

GRADE VI

Mathematics :

Work in the school-shop as an introduction to problems of profit and loss.

Percentages of waste in the craft work.

Calculations of the volume of wood required for making charkhas etc. Volumes of cubes, cuboids any cylinder. Calculation of areas.

The cost of cloth required for durries; cost of making dresses.

Social Studies:

The importance of cotton to the West; the whole story of the British occupation of India;

The causes of the origin of the East Indies-Trade; first trade concessions; relation of European companies and the workers; the East India Company

and the Indian merchants; the exploitation of the Indian peasant, worker and trader; the Industrial Revolution; competition with Indian trade; protection in England against Indian textiles; (I: c, d).

The story of the Indian national movement: the Swadeshi Movement, Swadeshi under Gandhiji; Charkha and Khadi as symbols of Indian freedom; the economics of Khadi (I: 3). The whole of I: 4.

Organising centres of craft training for the adult population of the village.

Different kinds of cotton and its geographical distribution in the world; map work and collection of specimens of different kinds of cotton; climatic conditions favourable to the growth of cotton *e. g.* soil, humidity, temperature; the idea of geographic control; import and export figures relating to Indian cotton; cotton exports and imports from and to different cotton-manufacturing and cloth-producing countries of the world (II).

The scramble for markets and raw materials; correlation with current events, *e. g.* the conquest of Abyssinia, Manchuria, China.

General Science:

Physical properties of water, its chemical composition and the mechanical devices for irrigation may be studied in connection with the geography of cotton; study of (I) with reference to cotton; insect pests; study of useful and harmful insects.

Drawing:

Posters for a campaign to popularise the use of Khadi; scale drawing in relation with craftwork.

Mother Tongue and Hindustani:

A good deal of very instructive and interesting reading material can be provided in the text book and the books for supplementary reading dealing with topics mentioned above under Social Studies and General Science. Composition work should also be closely correlated with the interests generated in connection with their craft and other work.

GRADE VII**Mathematics:**

The children should learn to understand the rates of interest charged and the method of the calculation of interest. Running of School Savings Bank will make the need of these calculations more important. Practical problems in time, speed and work with reference to the basic craft.

Graphs in connection with the progress made by students in craft work and in other school subjects. Square root calculation in the making of cloth. The mutual relation of warp, weft, poonja and hank.

Social Studies :

The effect of the Industrial Revolution on the textile industry (No. I 1, iii).

Effect of scientific and technical developments on clothing (No. I, 1, iv).

The story of Industrialism and imperial expansion as illustrated by the scramble for cotton growing areas and markets for textiles (No. 2, i and 2 u).

The World War (2, iii).

Development of cotton areas. World production of cotton, cloth imports and exports (IV).

Different methods of producing cotton individual and collective farming (land tenure systems 2. iv). Cotton growing in Egypt and the U. S. A. with reference to areas in the South—its association with slavery. The Civil War (3, iii).

History of the technique of weaving in India and other countries (No. V.)

General Science :

Bleaching, dyeing and printing of cloth. Relevant portions about mechanical appliance with reference to the development of the spinning and weaving technique (No. VIII).

Drawing :

Drawings and sections of objects to be made in the craft class.

Mother Tongue and Hindustani :

As in Grade VI.

